

# D-T4/T40

## SERVICE MANUAL

US Model

Canadian Model

D-T4

AEP Model

UK Model

E Model

Australian Model

D-T40



# Discman

## SPECIFICATIONS

### CD section

System  
Laser diode properties

Compact disc digital audio system  
Material: GaAlAs  
Wavelength: 780 nm  
Emission duration: Continuous  
Laser output: Less than 44.6 μW  
(This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.)  
20–20,000 Hz; ½ dB  
Line output (stereo minijack)  
Output level 1 V rms at 47 kilohms  
Load impedance over 10 kilohms  
Headphones (stereo minijack)  
9 mW + 9 mW at 32 ohms

### Radio section

Frequency range

FM: 87.6–108MHz (US, Canadian, UK, E, Australian model)  
87.6–107MHz (AEP, French model)  
87.5–108MHz (Italian model)  
AM: 530–1,605kHz (US, Canadian, UK, E, Australian model)  
531–1,602kHz (AEP, French model)  
526.5–1,606.5kHz (Italian model)

### Antennas

FM: Headphones cord or connecting cord antenna  
AM: Built-in ferrite bar antenna

### General

Power requirements

- Supplied:  
• Rechargeable battery pack BP-3  
• DC in 9V jack accepts the Sony AC power adaptor

Where purchased	Operating voltage
US, Canadian	120V AC, 60Hz
UK, Australian	240V AC, 50Hz
AEP, French, Italian	220V AC, 50Hz
E	110–240V AC, 50/60Hz

### Power consumption Dimension

1.2W DC  
Approx. 136×38.5×147 mm (5 ½×1 ½×5 ½ in.) (w/h/d)  
not incl. inclined part (depth), projecting parts and controls

Approx. 137.5×39.5×149 mm (5 ½×1 ½×5 ¾ in.) (w/h/d)

incl. projecting parts and controls

### Weight

Approx. 520 g (1 lb 2 oz) net

### Supplied accessories

Approx. 700 g (1 lb 9 oz) incl. rechargeable battery pack  
AC power adaptor (1)  
Rechargeable battery pack (1)  
Connecting cord (1)  
Carrying case (1)  
Carrying belt (1)  
Headphone (1) (UK model)  
AC plug adaptor (1) (E model)

### Supplied battery pack (BP-3)

Output voltage	6V
Capacity	1000 mA/h
Dimensions	Approx. 31.3×17.3×118.6 mm (1 ¼×1 ½×4 ¾ in.) (w/h/d)
Weight	Approx. 180 g (6 ½ oz)

### Charging time/Battery life

Charging time	Continuous disc playing time	Continuous radio reception
8 hours (fully charged)	approx. 4 hours	approx. 20 hours
5 hours (90% charged)	approx. 3.5 hours	—

### Notes on charging

- For charging, use only the supplied AC power adaptor. If not, the player will be damaged.
- The CD player can also be operated during charging. In this case, approx. 24 hours are necessary for a full charge. However, when the CD player does not operate normally, stop it and charge the unit for a while.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

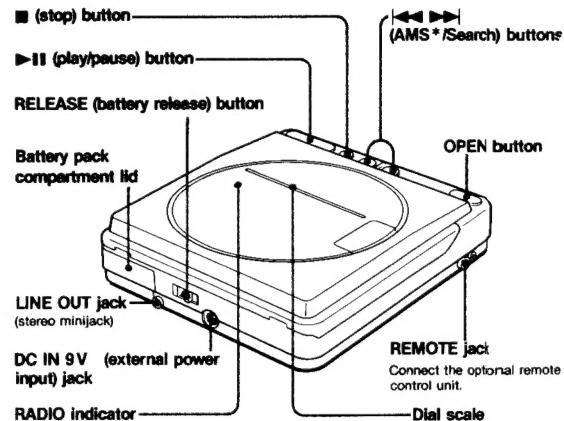
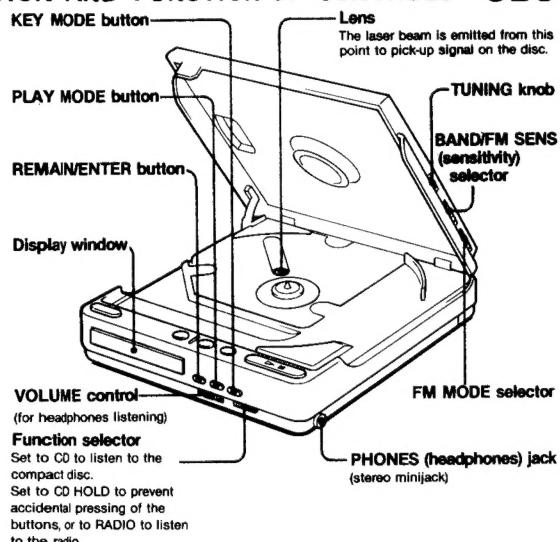
FM/AM COMPACT DISC  
COMPACT PLAYER  
**SONY**®



MICROFILM

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## LOCATION AND FUNCTION OF CONTROLS SECTION 1 GENERAL



\* AMS is an abbreviation of Automatic Music Sensor.

## SECTION 2 SERVICING NOTES

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

### SAFETY-RELATED COMPONENT WARNING!!

**COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

### Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No. : 9-960-027-11) issued separately before replacing the optical block. Note and specifications required to check are given below.

- FOK output : IC501 ⑨pin  
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 ⑩pin (FOK).
- S carve P-to-P value : 3Vp-p  
When checking S carve P-to-P value, remove the lead wire to disc motor.
- Adjusted part for focus gain adjustment : RV501
- RF signal P-to-P value : 0.7 - 1.25Vp-p
- Traverse signal P-to-P value : 1.5Vp-p
- The repairing grating holder is impossible.
- Adjusted part for tracking gain adjustment : RV502

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

## NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 25cm away from the objective lens.

### Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S801 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.

The laser diode is checked using the current value which flows to the laser diode inside the optical pick-up block.

### Procedure 1 (service mode or normal operation)

Check the laser diode emission with the eye.

1. Open upper panel.
2. S801 on as Fig. 1.  
(In service mode, this operation is not necessary.)
3. Press the  $\blacktriangleright\ll$  key.  
(In service mode, this operation is not necessary.)
4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus search. If it does not, APC circuit or optical pick-up block is defective.

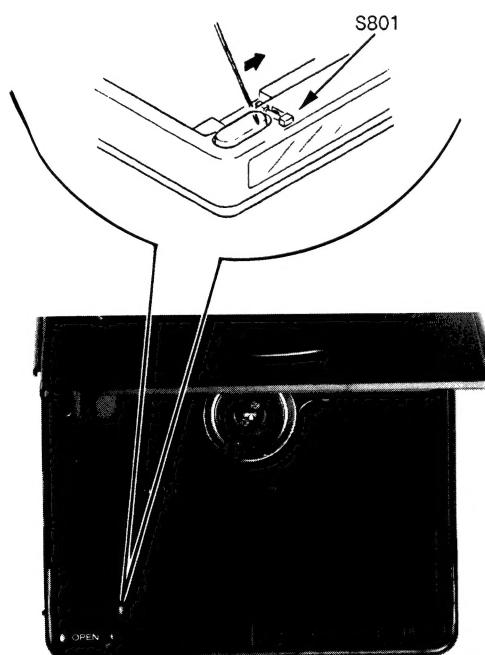


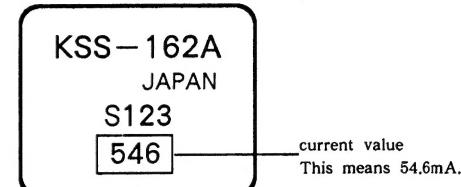
Fig.1 Turning S801 on

### Procedure 2 (service mode or normal operation)

Check by the current with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the optical pick-up block.

(Label on optical pick-up block)



The current value varies with the set.

3. Connect a VOM as shown in Fig. 2.
4. Press the  $\blacktriangleright\ll$  key.
5. Calculate the current by the VOM reading.  
VOM reading (V)  $\div 10$  = current (A)  
ex. VOM reading = 0.56V  
 $0.56 \div 10 = 0.056$  (A) = 56 (mA)
6. Confirm that the ammeter reading is within the range given below.  
value on label:  $\pm 5\%$  mA ( $25^{\circ}\text{C}$ )  
variation relative to temperature:  $0.4\text{mA}/^{\circ}\text{C}$   
(Current increases when temperature rises and decreases when it drops.)

If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or optical pick-up block is defective.

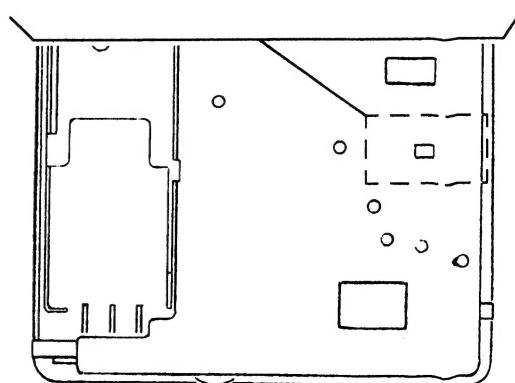
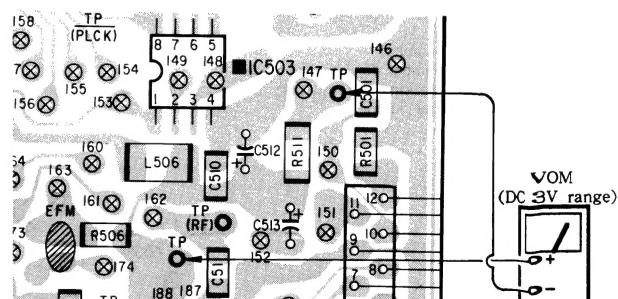


Fig.2 VOM Connection

## SERVICE MODE (service program)

This set has built-in service program in the microcomputer as usual sets.

The operation method of service program is explained below.

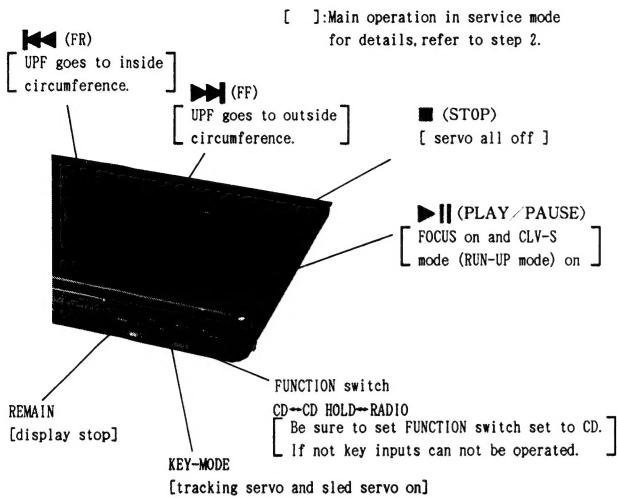


Fig.3 Key Positions

### • Step 1 (Service Mode setting method)

1. Turn the FUNCTION switch set to CD with the external power supply not plugged in (no power applied to set) and press the **▶||** key.
2. Solder jumper TEST terminal.  
(IC801 pin 24 (TEST) is grounded.)
3. Plug in external power supply.  
This puts the set into service mode.

### • Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.  
With this the LCD display should be present in service mode. Even if LCD dose not display, other operations will be performed.
2. When **▶** or **||** key is pressed, the optical pick-up block moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When **▶||** Key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S801 are to be ON. A sound is not produced as muting is ON.
7. All servo (focus, tracking, sled and spindle) go off when **■** key is pressed.

### • Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the solder jumper TEST terminal.
2. The set will now operate normally.

TEST terminal  
Solder jumper for service mode.  
(After checking or adjusting in service mode, be sure to remove this solder jumper.)

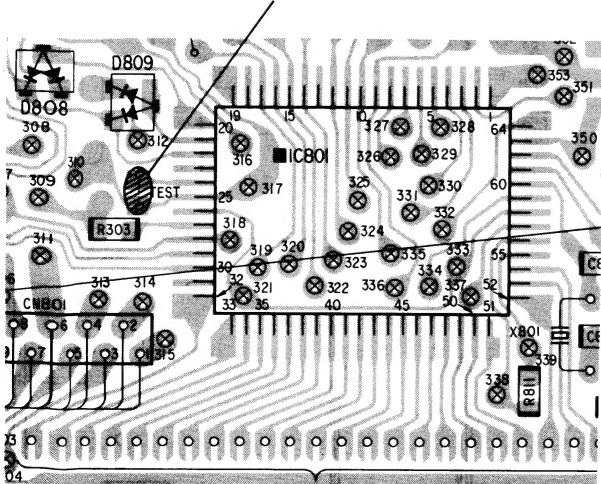
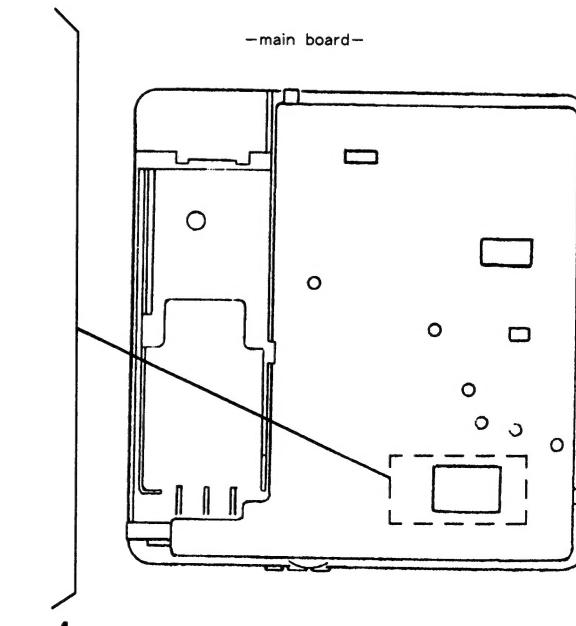


Fig.4 TEST terminal position



## SECTION 3

### ELECTRICAL ADJUSTMENTS

#### CD SECTION

##### Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT in service mode.  
Be sure to release service mode after completing adjustment.  
(Refer to "Service Mode (service program)" on page 4.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage : DC 9V  
FUNCTION switch : CD

#### PREPARATION

Put the set into service mode (See page 4.) and perform the following checks. Repair if there are any abnormalities.

##### • Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the **►**, **◄** keys and make sure that the optical pick-up block moves smoothly, without catching, from the inmost → outmost → inmost circumference.  
**►**: optical pick-up block moves outward  
**◄**: optical pick-up block moves inward

##### • Focus Search Check

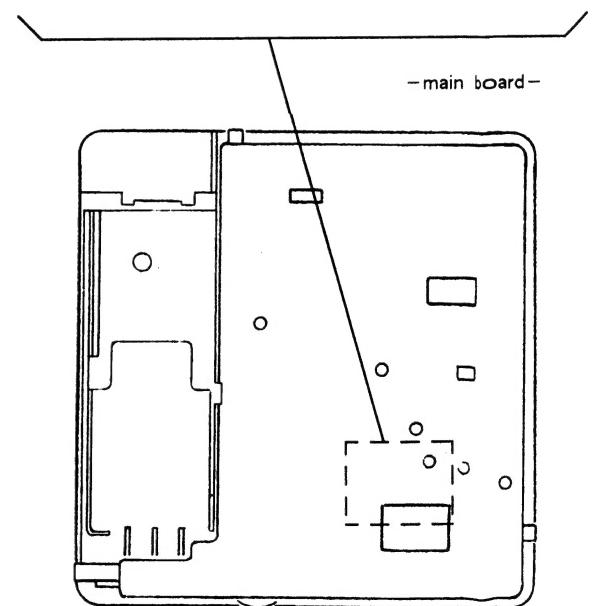
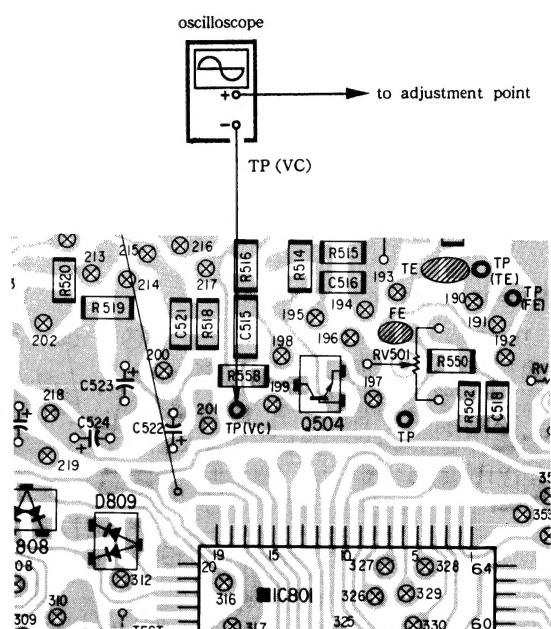
1. Press the OPEN button and open the top panel.
2. Press the **►**, **||** key. (Focus search is performed continuously.)
3. Observe the optical pick-up block objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the **■** key.  
Check that focus search operation stops. If it does not, press the **■** key again.

#### VC (1/2 Vcc) Connecting Point

##### FOCUS BIAS ADJUSTMENT

##### TRACKING BALANCE ADJUSTMENT

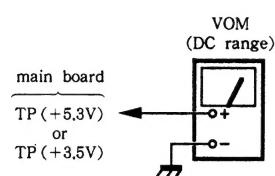
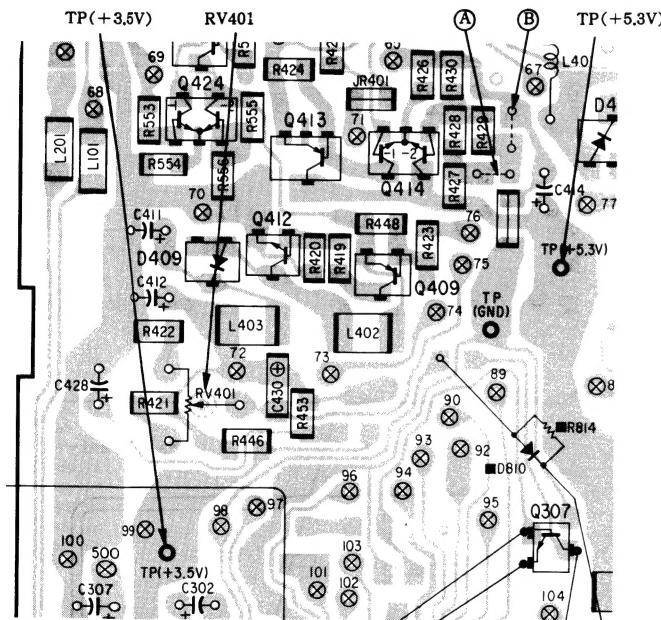
When the adjustments above are performed, connect the  $\ominus$  side of oscilloscope to the point below.



VC connecting point

**5.3V Adjustment****Adjustment Procedure :**

1. Put the set into service mode (see page4).
2. Connect the VOM to main board test point TP(+5.3V).
3. Adjust RV401 for 5.2V–5.3V reading on the VOM.
4. After adjustment, release service mode (see page4).

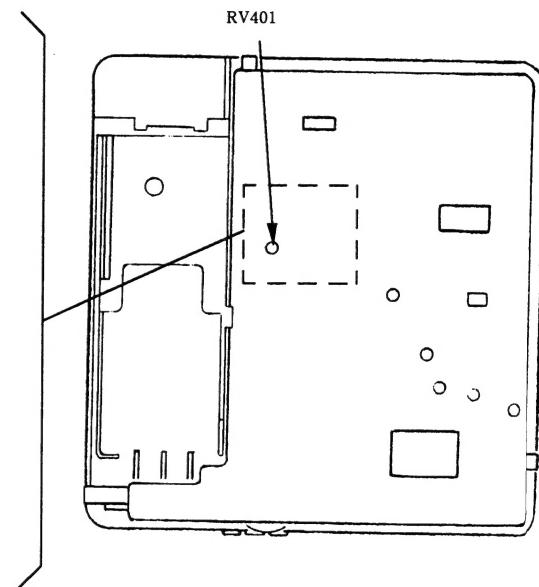
**Adjustment Location : main board****3.5V Adjustment****Adjustment Procedure :**

1. Put the set into service mode (see page4).
2. Connect the VOM to main board test point TP(+3.5V).
3. Adjust the pattern connection (Ⓐ or Ⓑ) to obtain 3.45V to 3.6V reading on the VOM.

pattern connection		VOM reading
(Ⓐ)	(Ⓑ)	
○	x	down
x	x	
x	○	up
○	○	

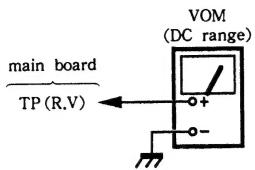
○: short      x : open

4. After adjustment, release service mode (see page4).



### Rechargeable Voltage Adjustment

#### Adjustment Procedure :



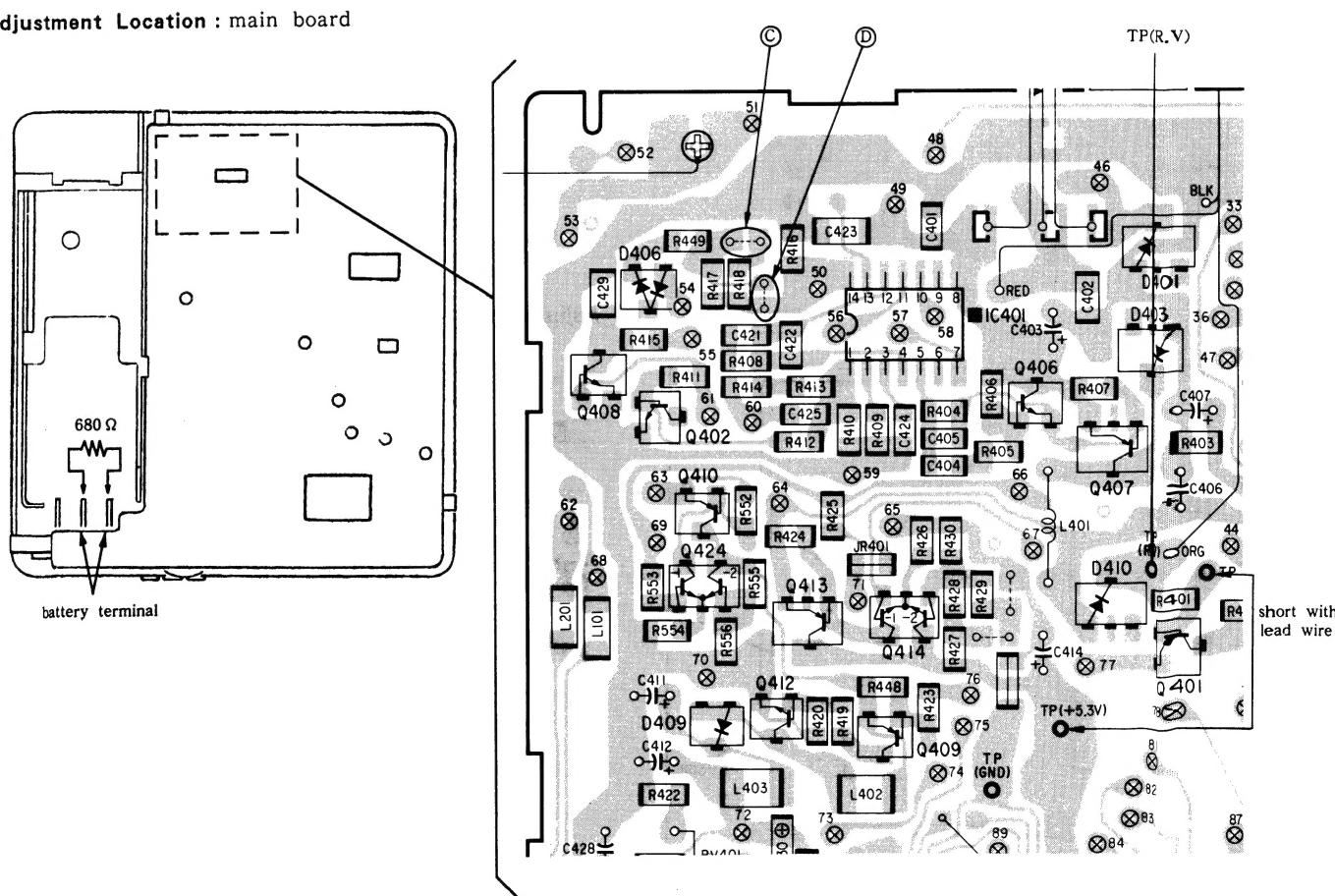
1. Connect the VOM to main board test point TP(R.V).
2. Short between the Q401 base and GND. Connect a  $680\ \Omega$  resistor between pin② and pin③ of battery terminal as shown below.
3. Apply DC 9V with requarated dc power supply from external power jack CNJ401.
4. Adjust the pattern connection(◎ or ◊) to obtain 7.25 to 7.47V reading on the VOM.

pattern connection		VOM reading
C	D	
○	○ or ×	down ↑ up
x	○	
x	x	

○ : short      x: open

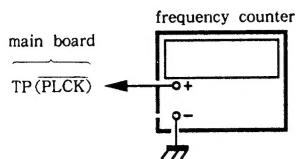
Note : Measure after the VOM reading becomes stable.

#### Adjustment Location : main board



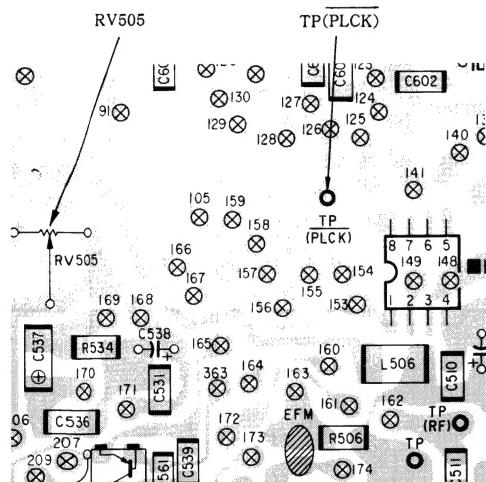
## PLL Free Run Frequency Check and Adjustment

### **Check/Adjustment Procedure :**

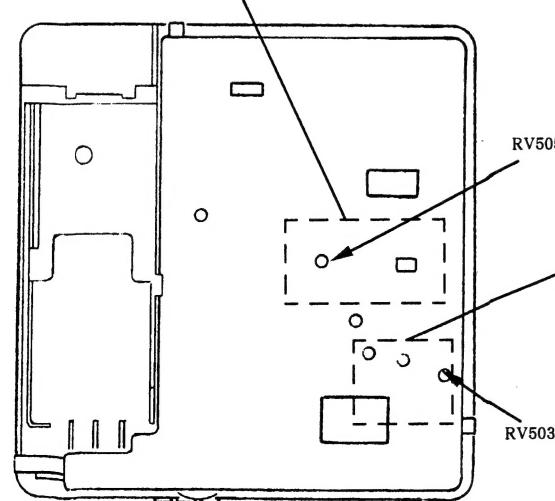


1. Disconnect EFM solder jumper terminal in the diagram below.
  2. Connect a frequency counter to main board test point TP(PLCK).
  3. Put the set into service mode (See page 4).
  4. Check that the frequency counter reading is  $4.31 \pm 0.01$  MHz. If not, adjust RV505 so that it is  $4.31 \pm 0.01$  MHz.
  5. After adjustment, release service mode (see page 4).
  6. Short the jumper terminal disconnected in step 1.

**Check/Adjustment Location:** main board



#### EFM solder jumper termina

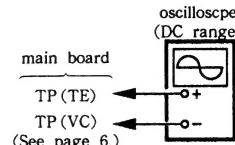


## **Tracking Balance Adjustment**

### **Conditions :**

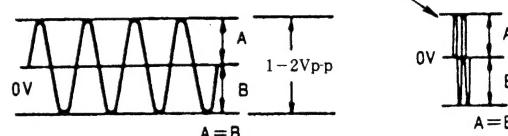
The set should be placed either horizontally.

#### **Adjustment Procedure :**



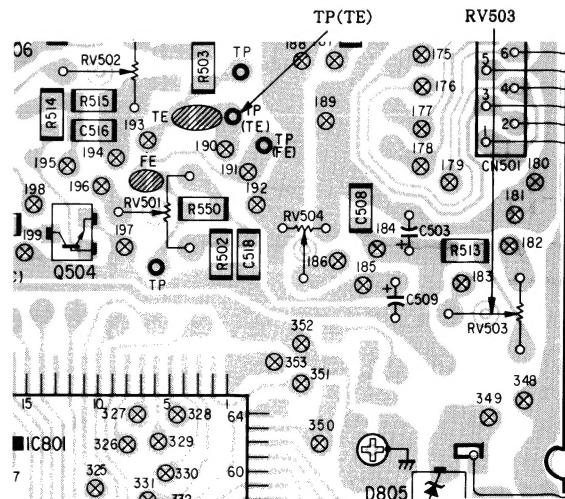
1. Connect the oscilloscope to main board TP(TE).
  2. Put the set into service mode (See page 6.)
  3. Press the **►►** and **◀◀** keys to move the optical pick-up block to the center.
  4. Insert the disc (YEDS-18) and close the top panel.
  5. Press the **►||** key.  
It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.
  6. Adjust RV503 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to QV.

**Note :** Take sweep time as long as possible to obtain best waveform.



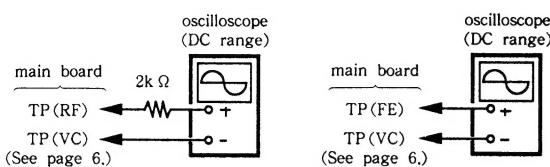
7. Unplug the external power supply to stop spindle motor from rotating.
  8. After adjustment, release service mode (see page 4).

**Adjustment Location:** main board



**Focus Bias Adjustment****Conditions :**

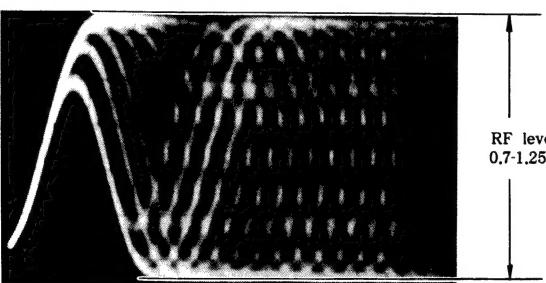
The set should be placed either horizontally.

**Adjustment Procedure :**

- Put the set into service mode (See page 4).
- Connect the oscilloscope to main board test point TP(RF).
- Press the **▶▶** and **◀◀** key to move the optical pick-up block to the center. (Move the optical pick-up block to the music area on the disc to enable easy visibility of the eye pattern).
- Insert the disc (YE8S-18) and close the top panel.
- Press the **▶▶** key.  
It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.
- Press the KEY-MODE button (Tracking and sled go ON).
- Adjust RV504 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape ( $\diamond$ ) in the center of the waveform can be clearly distinguished.

**RF Signal Reference Waveform (eye pattern)**

VOLT/DIV : 200mV  
TIME/DIV : 500nS

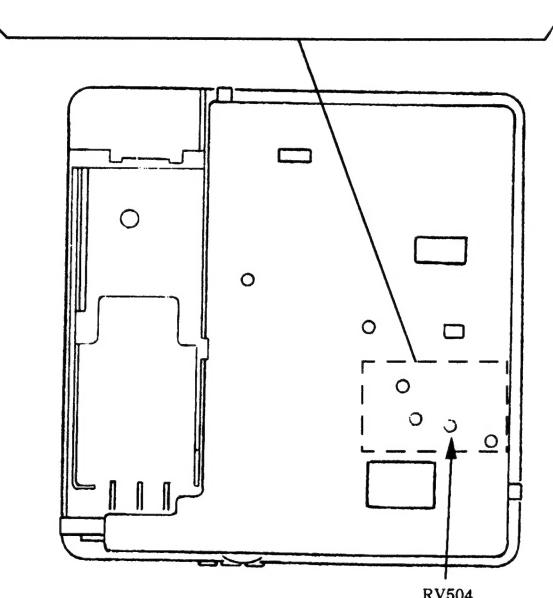
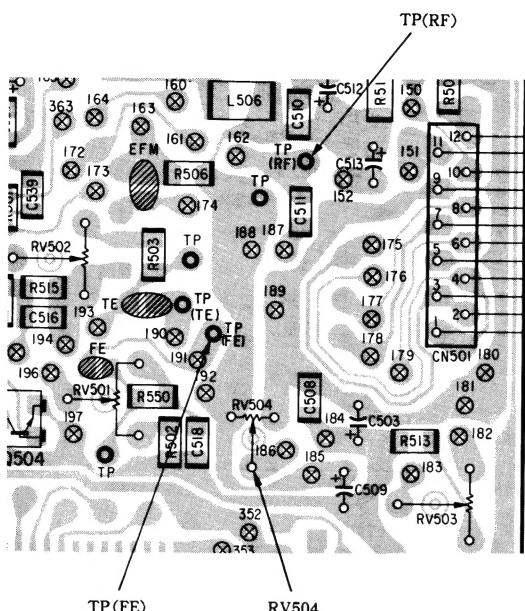


When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

- Unplug the external power supply to stop spindle motor from rotating.
- Remove the disc and connect the oscilloscope to main board TP(FE).
- Adjust RV503 again referring to the table followed.

voltage of TP (FE)	adjustment
more than +100mV	Not adjust again.
+50 to 100mV	Adjust RV503 again for +100mV reading on oscilloscope.
less than +50mV	Not adjust again.

- After adjustment, release service mode (see page 6).

**Adjustment Location : main board****Focus/Tracking Gain Adjustment**

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

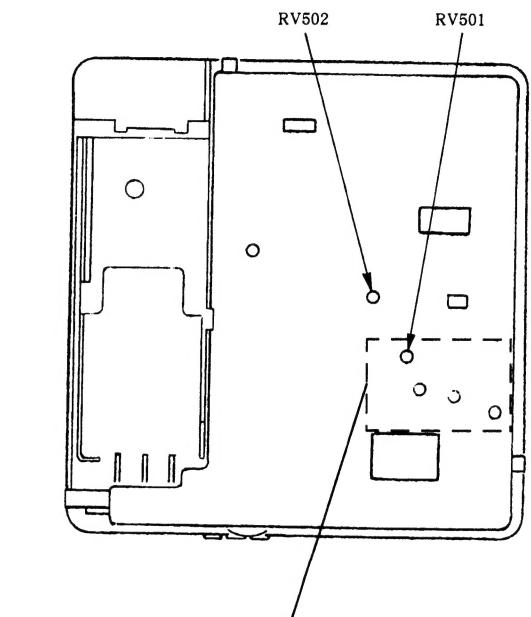
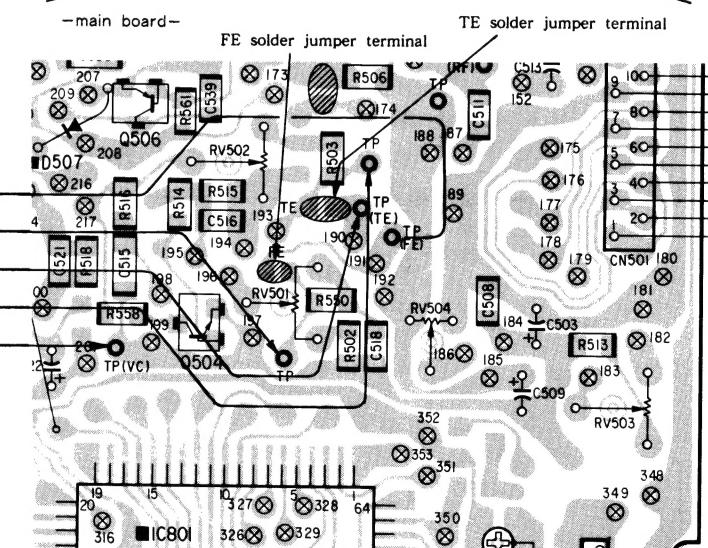
- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts :

- UPF (optical pick-up block)
- RV501 (focus gain volume)
- RV502 (tracking gain volume)

On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD jig Instruction Manual.

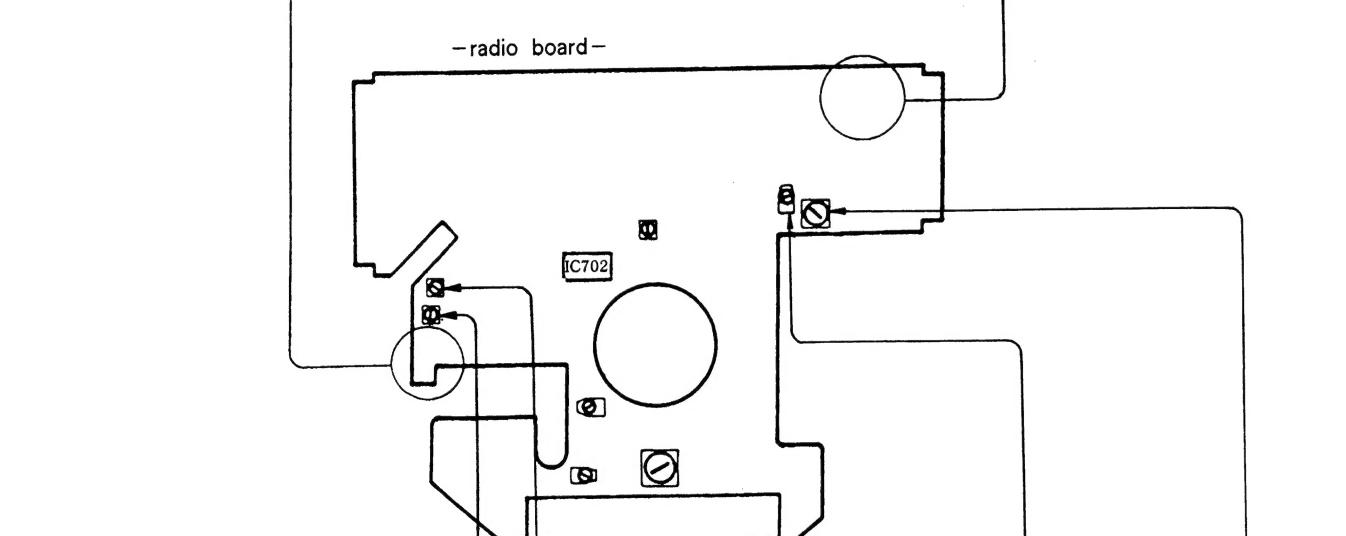
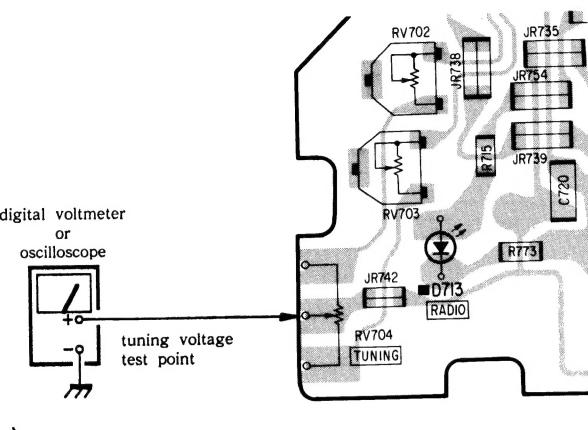
Please be careful not to move RV501 (focus gain volume), RV502 (tracking gain volume) ordinarily.

**CD jig connection :**

Remove the solder jumpers at the TE and FE locations and connect the CD jig.

**FM SECTION****Conditions :**

- Function switch : RADIO
- Band switch : FM DX



Adjustment parts	RV703	RV702
Digital voltmeter or oscilloscope reading	1V	9V
Dial pointer	f min.	f max.

**Tuning Voltage Adjustment**

Adjustment parts	CT701	L702
SG frequency	109.5MHz (107.8MHz) [108.25MHz]	86.5MHz (87.35MHz) [87.35MHz]
Dial pointer	f max.	f min.

**Adjust for maximum reading on VTVM.****FM Frequency Coverage Adjustment**

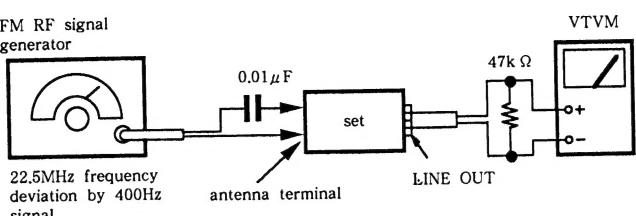
no-mark : US, Canadian, UK, E, Australian

( ) : AEP, French

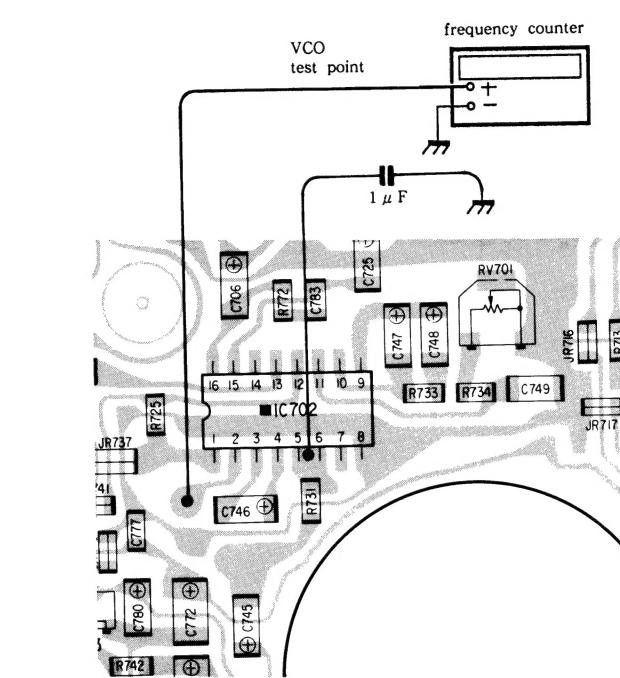
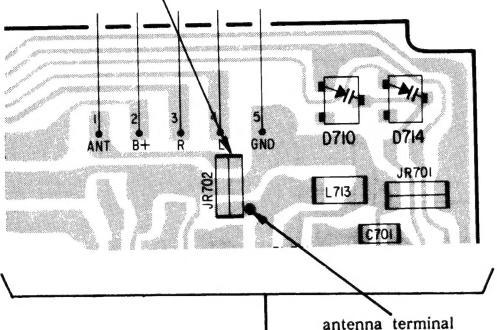
[ ] : Italian

**VCO Adjustment****Adjustment Procedure :**

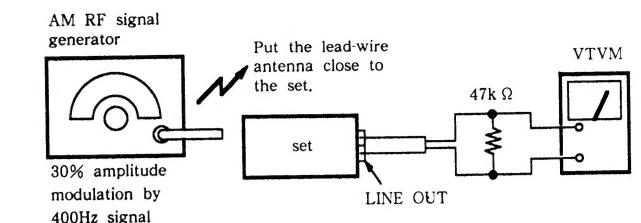
1. Connect a  $1\mu F$  capacitor as follows.
2. Adjust RV701 for  $19 \pm 0.02\text{kHz}$  on the frequency counter.
3. Remove the capacitor connected in step 1.



- Repeat the procedures in each adjustment several times, and the frequency coverage adjustment should be finally done by the trimmer capacitors.
- Remove chip jumper for adjustments. Solder chip jumper after adjustments.

**AM SECTION****Conditions :**

- Function switch : RADIO
- Band switch : AM



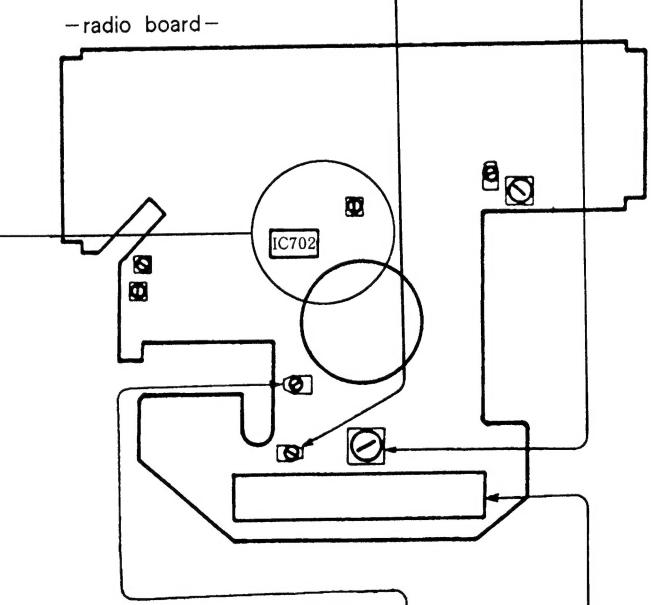
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM Frequency Coverage Adjustment		
Adjust for a maximum reading on VTVM.		
Dial pointer	f max.	f min.
SG frequency	1,680kHz (1,631.5kHz) [1,631.5kHz]	515kHz (516.5kHz) [516.5kHz]
Adjustment parts	CT703	T702

no-mark : US, Canadian, UK, E, Australian

( ) : AEP, French

[ ] : Italian

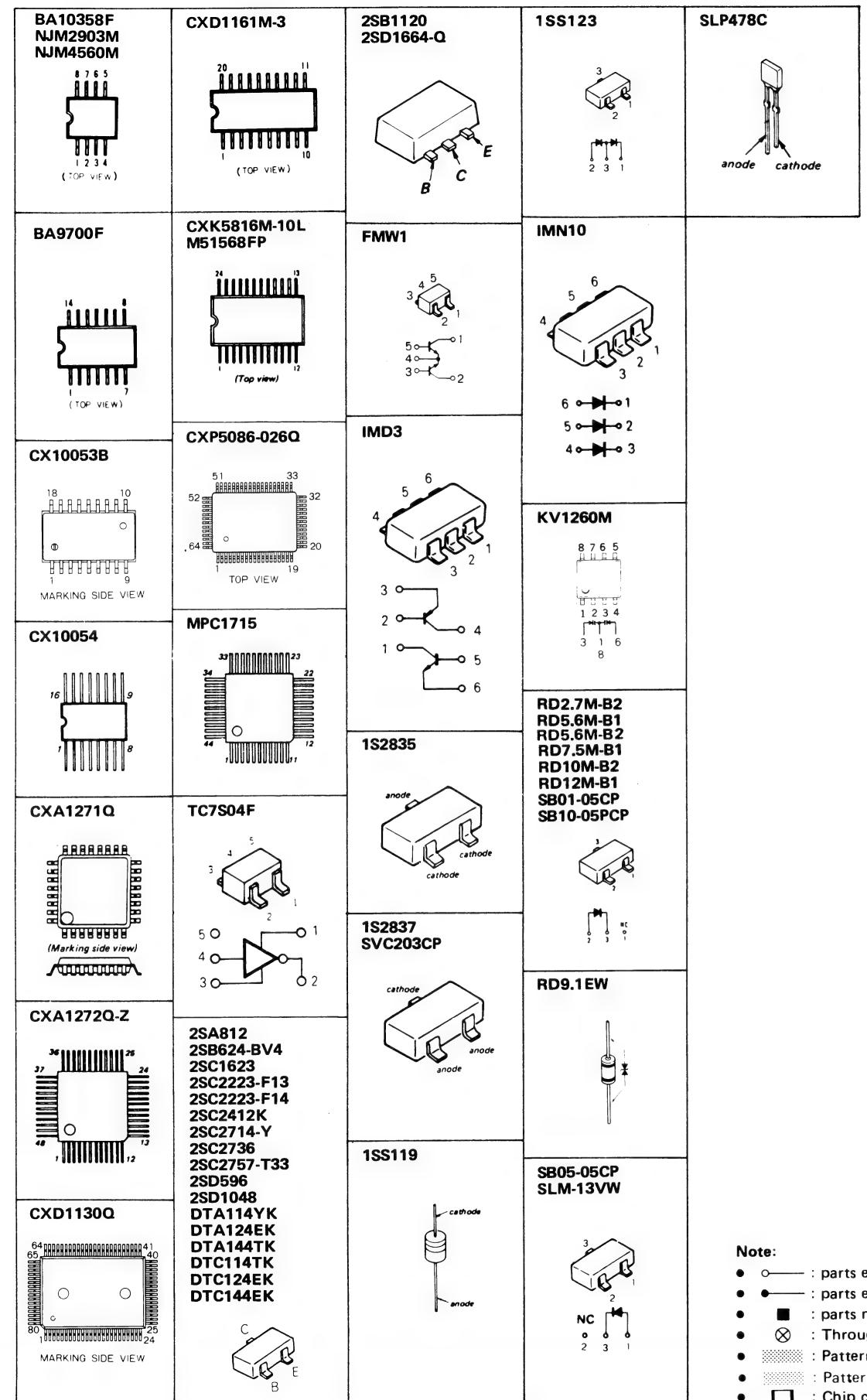


Adjustment parts	CT704	L711
SG frequency and dial pointer	1,400kHz	620kHz

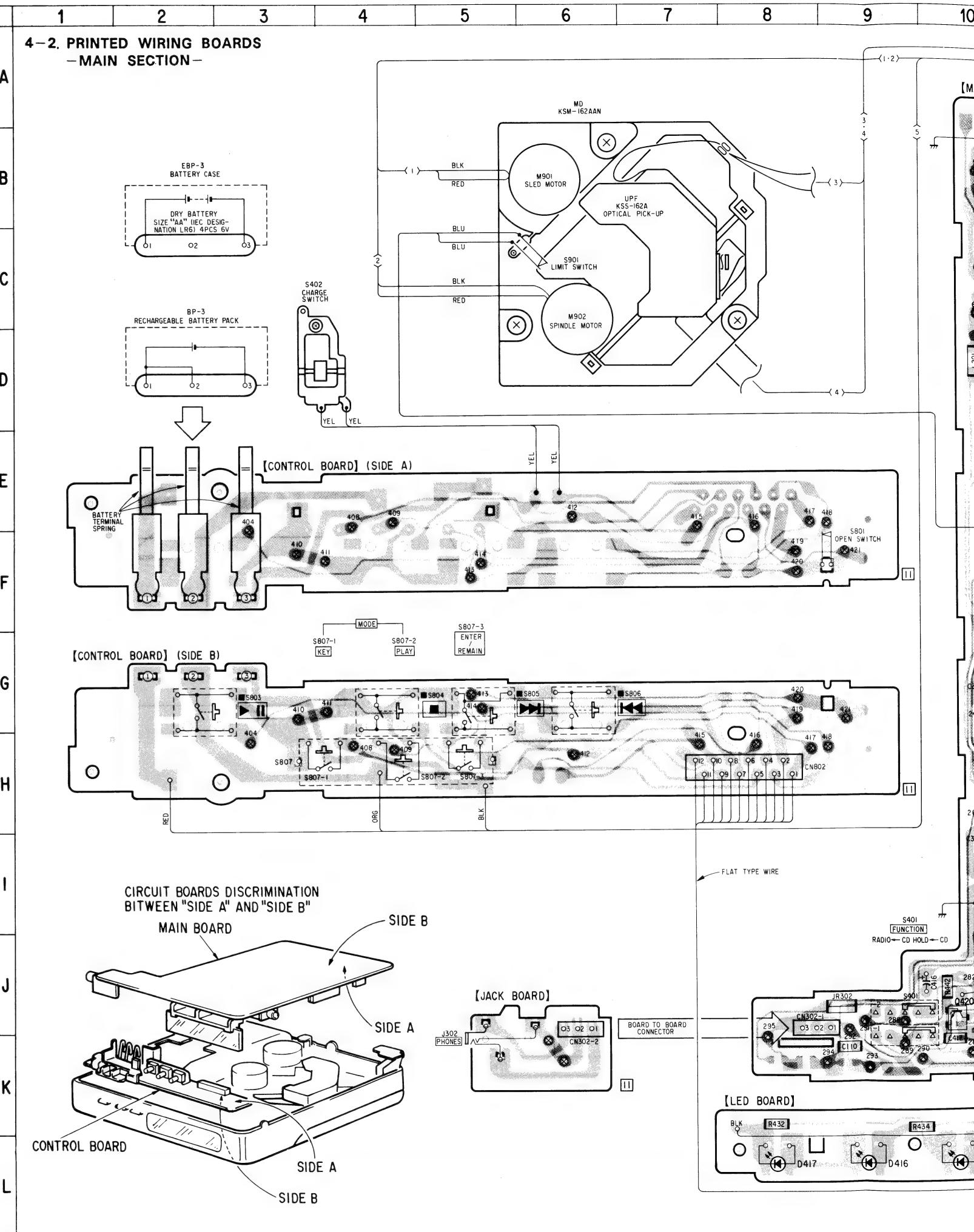
**AM Tracking Adjustment**

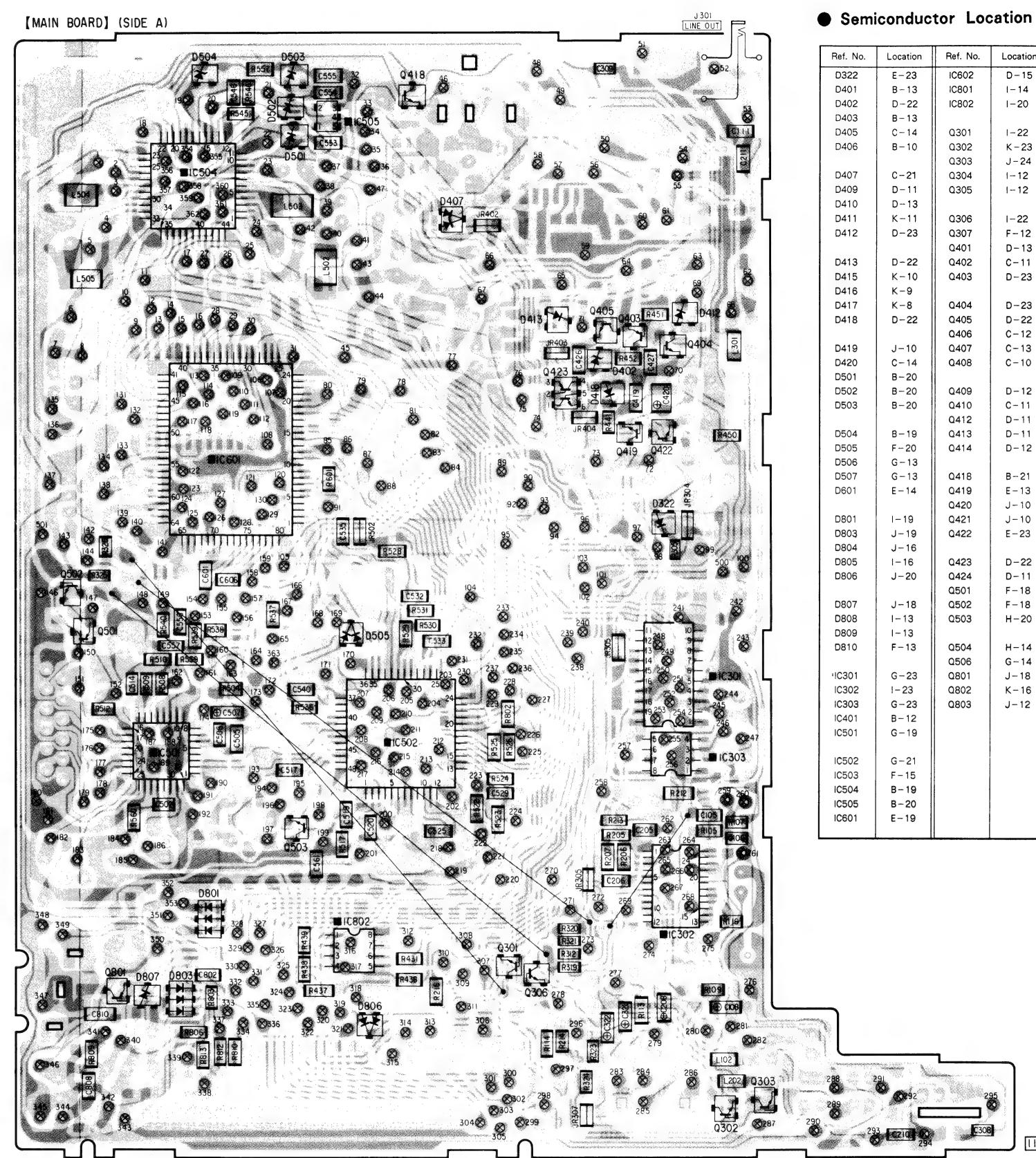
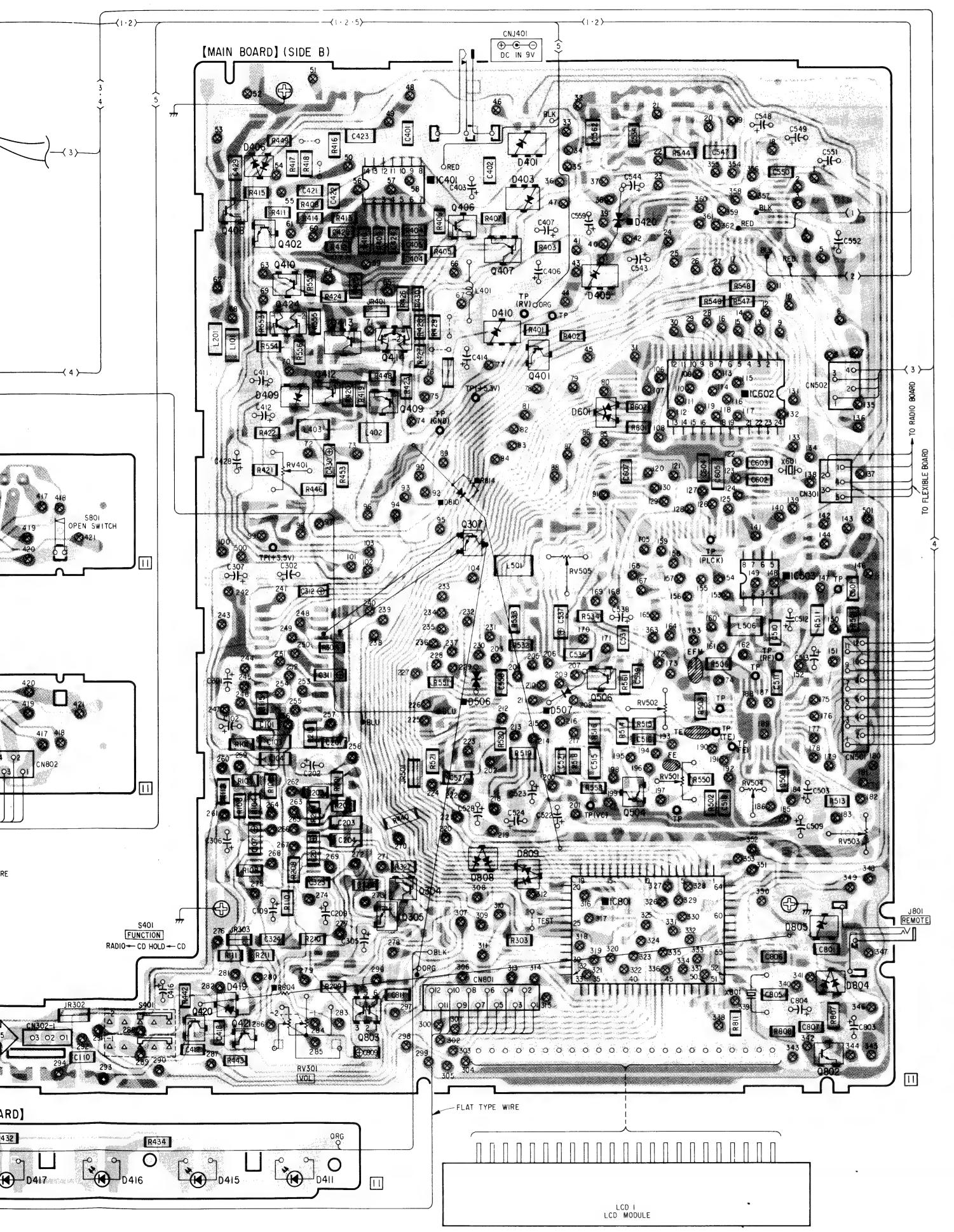
## SECTION 4 DIAGRAMS

### 4-1. SEMICONDUCTOR LEAD LAYOUTS

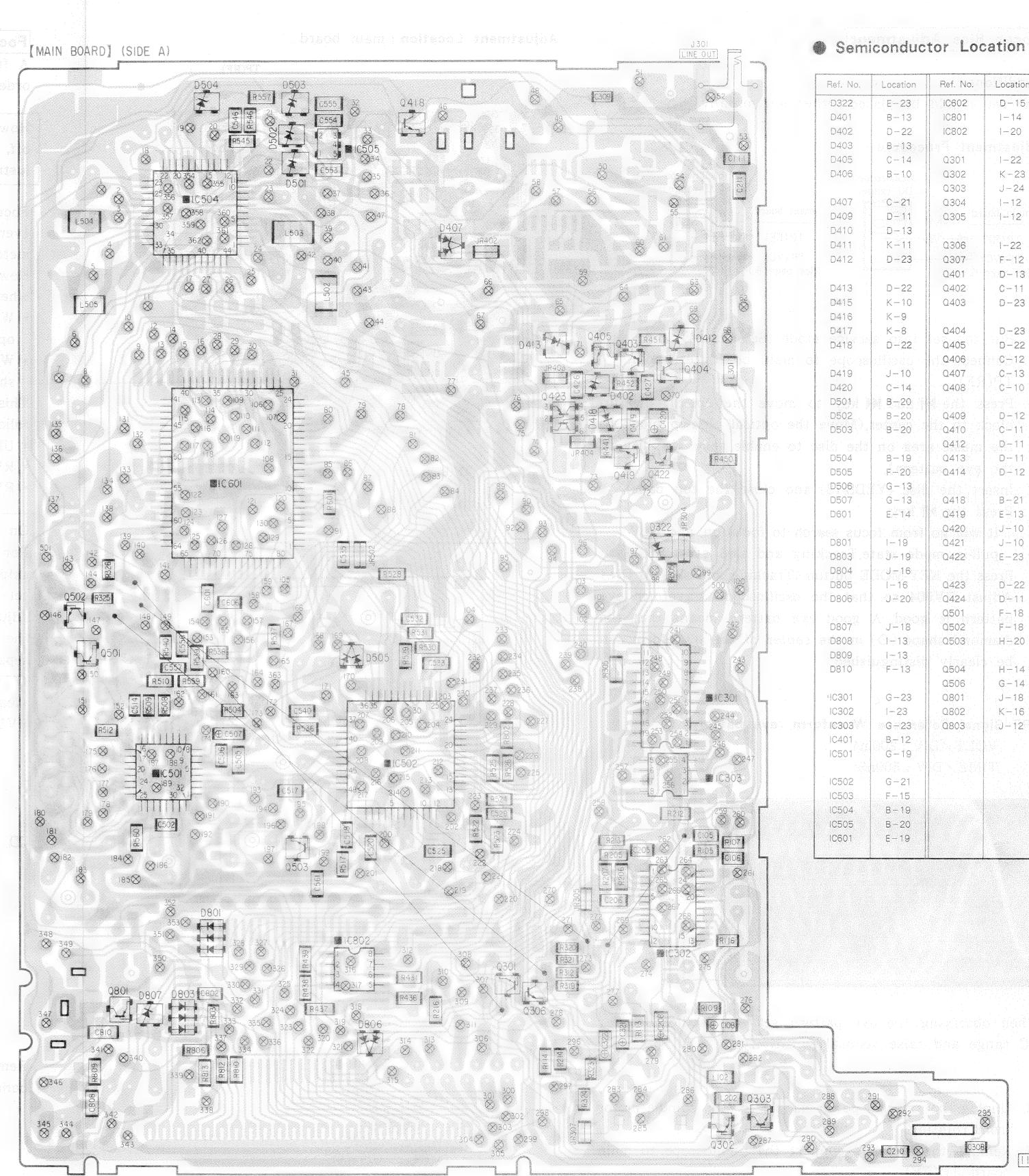
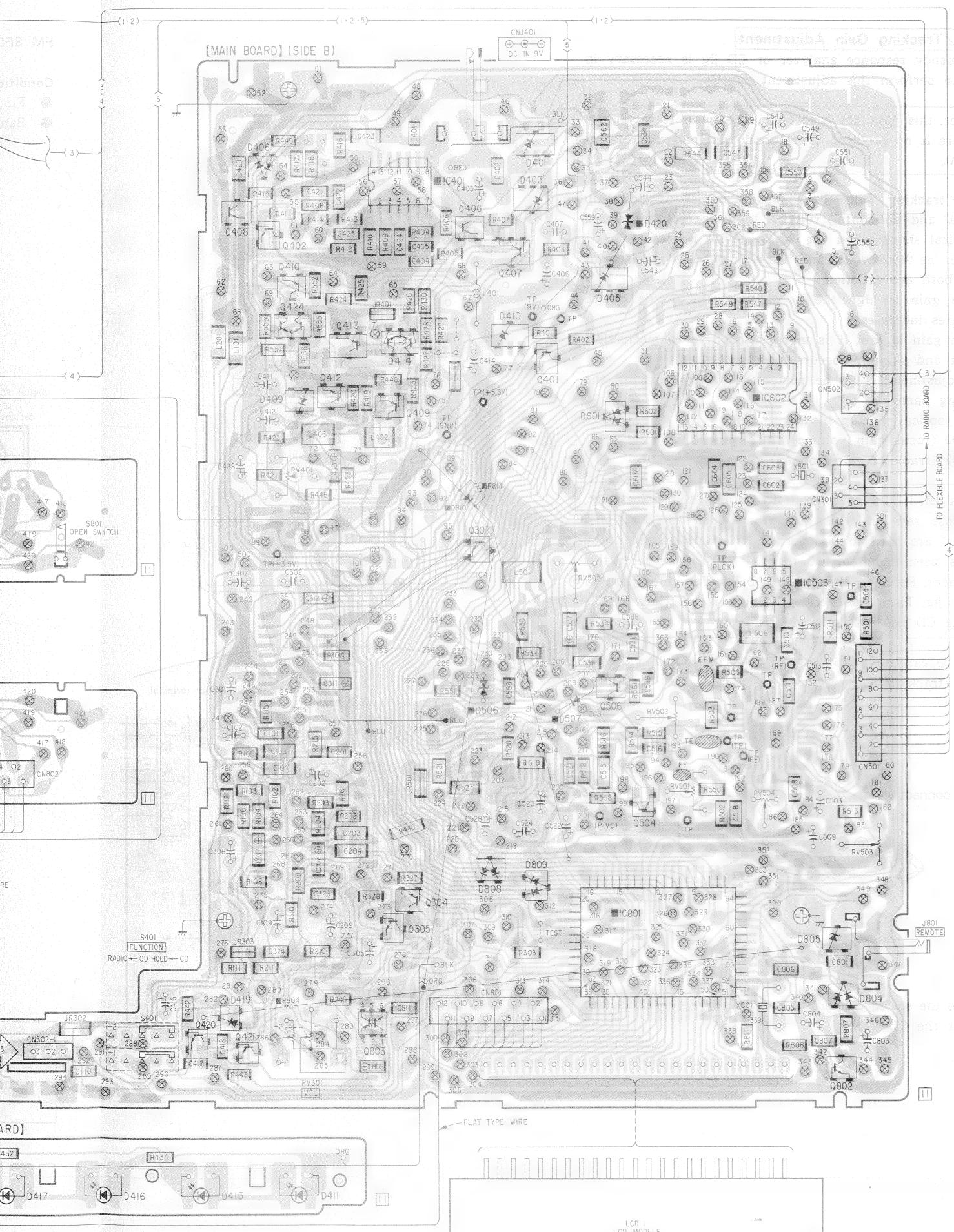


### 4-2. PRINTED WIRING BOARDS — MAIN SECTION —





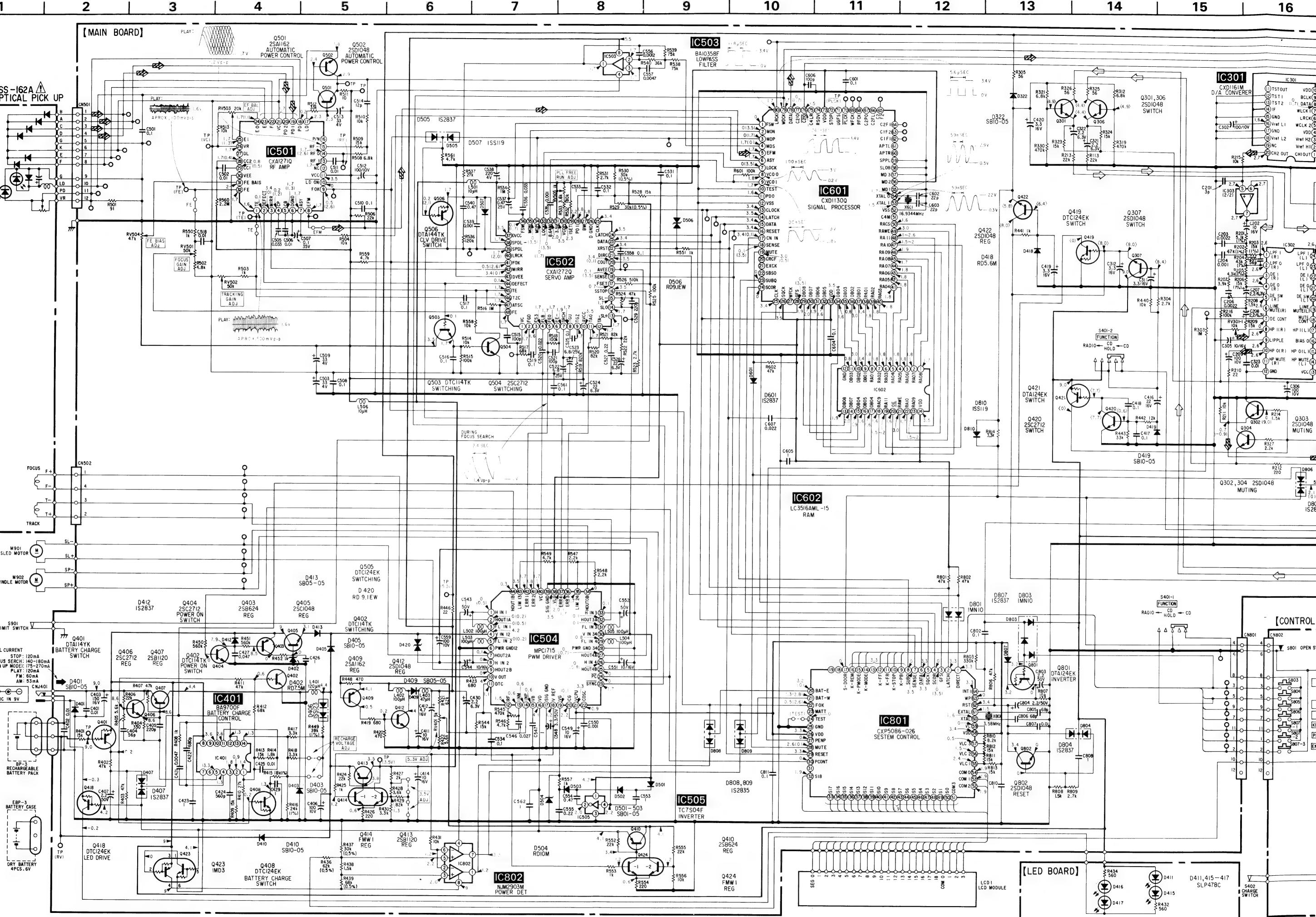
Ref. No.	Location	Ref. No.	Location
D302	E-15	IC802	I-20
D401	B-13	IC801	I-14
D402	D-22		
D403	B-13		
D405	C-14	Q301	I-22
D406	B-10	Q302	K-23
D407	C-21	Q303	J-24
D409	D-11	Q305	I-12
D410	D-13		
D411	K-11	Q306	I-22
D412	D-23	Q307	F-12
D413	D-22	Q401	D-13
D415	K-10	Q402	C-11
D416	K-9	Q403	D-23
D417	K-8	Q404	D-23
D418	D-22	Q405	D-22
D419	J-10	Q406	C-12
D420	C-14	Q407	C-13
D501	B-20	Q409	D-12
D502	B-20	Q410	C-11
D503	B-20	Q412	D-11
D504	B-19	Q413	D-11
D505	F-20	Q414	D-12
D506	G-13	Q418	B-21
D507	G-13	Q419	E-13
D601	E-14	Q420	J-10
D801	I-19	Q421	J-10
D803	J-19	Q422	E-23
D804	J-16		
D805	I-16	Q501	F-18
D806	J-20	Q502	H-20
D807	J-18	Q503	
D808	I-13		
D809	I-13	Q504	H-14
D810	F-13	Q506	G-14
IC301	G-23	Q801	J-18
IC302	I-23	Q802	K-16
IC303	G-23	Q803	J-12
IC401	B-12		
IC501	G-19		
IC502	G-21		
IC503	F-15		
IC504	B-19		
IC505	B-20		
IC601	E-19		

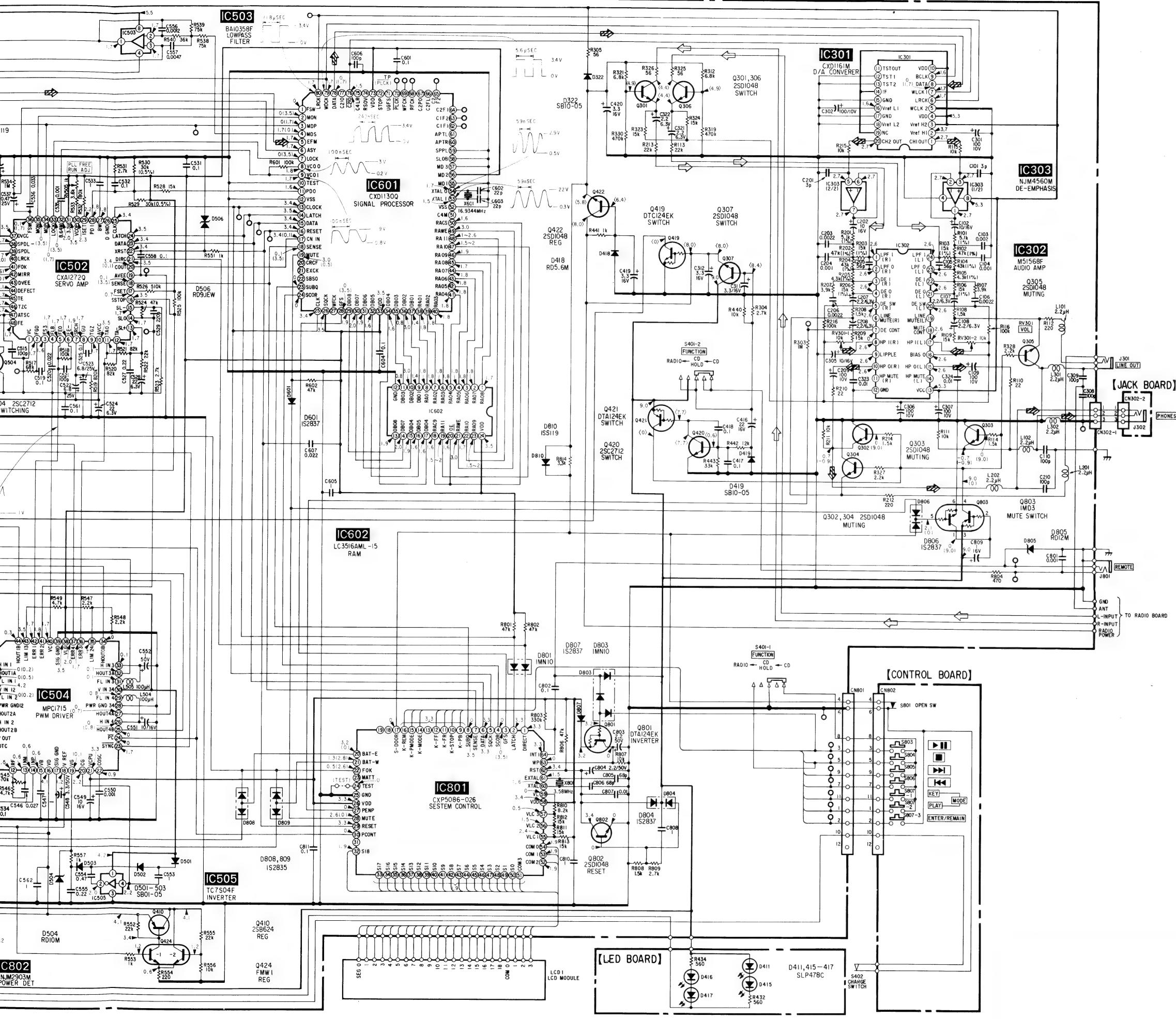


### Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D322	E-23	IC802	D-15
D401	B-13	IC801	I-14
D402	D-22	IC802	I-20
D403	B-13	Q301	I-22
D405	C-14	Q302	K-23
D406	B-10	Q301	J-24
D407	C-21	Q303	I-12
D409	D-11	Q305	I-12
D410	D-13		
D411	K-11	Q306	I-22
D412	D-23	Q307	F-12
D413	D-22	Q401	D-13
D415	K-10	Q402	C-11
D416	K-9	Q403	D-23
D417	K-8	Q404	C-13
D418	D-22	Q405	D-22
D419	J-10	Q406	C-12
D420	C-14	Q407	C-13
D501	B-20	Q408	C-10
D502	B-20	Q410	D-12
D503	B-20	Q412	D-11
D504	B-19	Q413	D-11
D505	F-20	Q414	D-12
D506	G-13	Q418	B-21
D507	G-13	Q419	E-13
D601	E-14	Q420	J-10
D801	I-19	Q421	J-10
D803	J-19	Q422	E-23
D804	J-16		
D805	I-16	Q501	D-22
D806	J-20	Q502	D-11
D807	J-18	Q503	F-18
D808	I-13	Q504	H-20
D809	I-13	Q505	H-14
D810	F-13	Q506	G-14
IC301	G-23	Q801	J-18
IC302	I-23	Q802	K-16
IC303	G-23	Q803	J-12
IC401	B-12		
IC501	G-19		
IC502	G-21		
IC503	F-15		
IC504	B-19		
IC505	B-20		
IC601	E-19		

## 4-3. SCHEMATIC DIAGRAMS - MAIN SECTION -





- Note:**

  - All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - % : indicates tolerance.

**Note:**  
 The components identified by mark  or dotted line with mark  are critical for safety.  
 Replace only with part number specified.

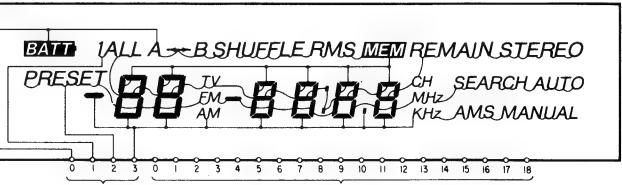
- Switch

Ref. No.	Switch	Position
S401	FUNCTION	CD
S801	OPEN SWITCH	ON
S803	►	OFF
S804	■	OFF
S805	►	OFF
S806	◀	OFF
S807-1	KEY MODE	OFF
S807-2	PLAY MODE	OFF
S807-3	ENTER/REMAIN	OFF
S901	LIMIT SWITCH	OFF

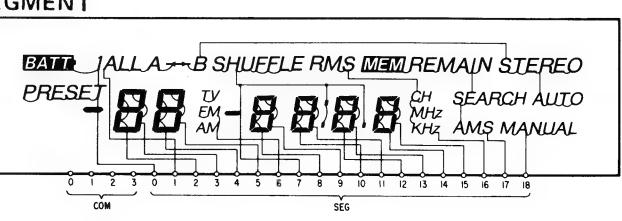
- : B+ Line
  - [ ] : adjustment for repair.
  - Voltage waveform and total current are measured with top panel closed when FUNCTION switch set to CD.
  - Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
    - no mark: stop mode
    - ( ) : play mode
  - Voltages are taken to ground in service mode with a VOM (50 k $\Omega$ /V).  
Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken to ground in play condition of service mode with a oscilloscope.  
Voltage variations may be noted due to normal production tolerances.
  - Signal path.

**See page 4 setup of service mode**

LCD MODULE  
COMMON



COM



### ● SCHEMATIC DIAGRAM —RADIO SECTION—

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- % : indicates tolerance.

**Note:**

The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**● Switch**

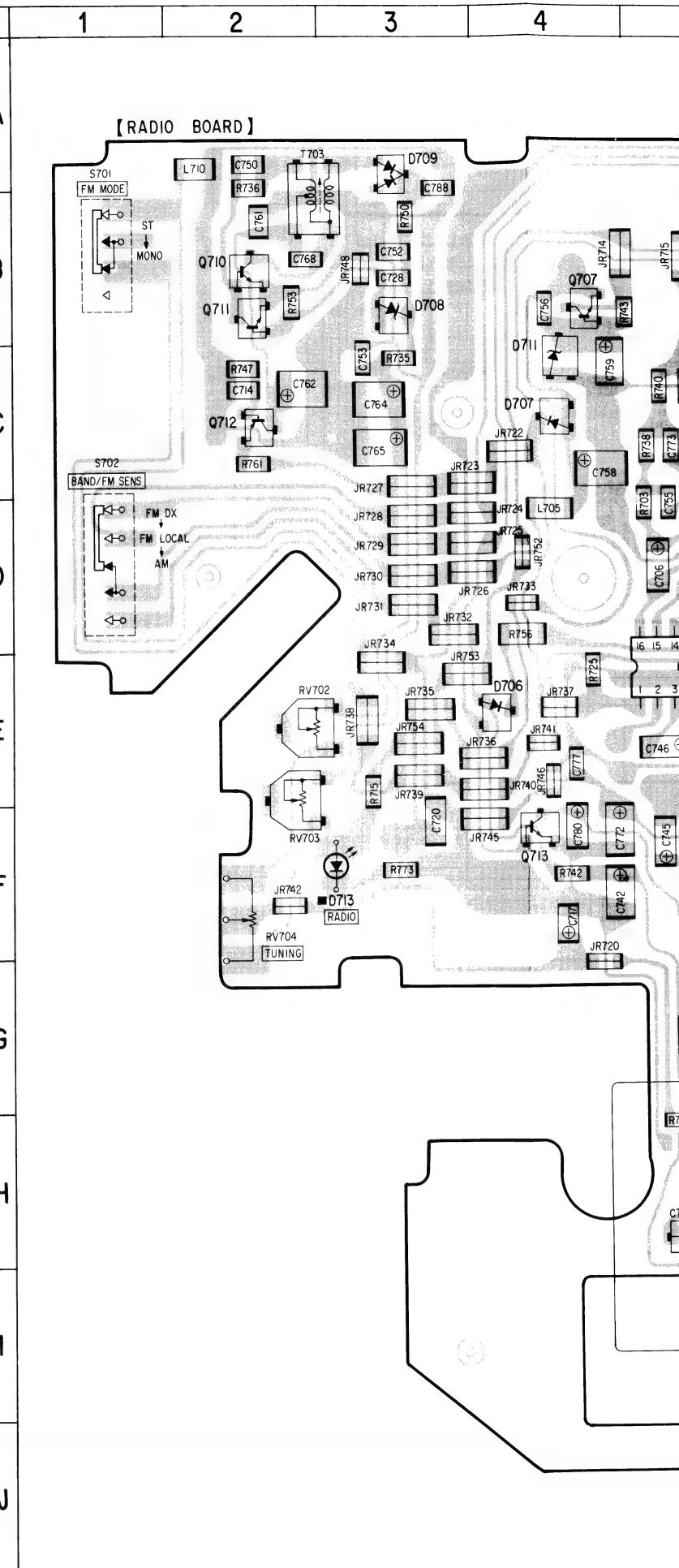
Ref. No.	Switch	Position
S701	FM MODE	ST
S702	BAND/FM SENS	FM DX

- : B+ Line
- : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- Voltage are dc with respect to ground under no-signal (detuned) conditions when FUNCTION switch set to CD. no mark: FM  
( ) : AM
- Voltages are taken with a VOM (50 k $\Omega$ /V). Voltage variations may be noted due to normal production tolerances.
- Signal path.  
: FM

**● Semiconductor Location**

Ref. No.	Location
D701	C-10
D702	C-8
D705	H-5
D706	E-4
D707	C-4
D708	B-3
D709	A-3
D710	B-11
D711	C-4
D712	B-7
D713	F-13
D714	B-14
IC701	G-8
IC702	E-5
Q701	C-11
Q702	D-10
Q703	D-8
Q706	D-8
Q707	B-4
Q708	B-7
Q710	B-2
Q711	B-2
Q712	C-2
Q713	F-4
Q714	E-8
Q715	F-8

4-4. PRINTED WIRING BOARDS —RADIO SECTION— ● See page 13



**Note:**

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- : Chip components extracted from the rear side.

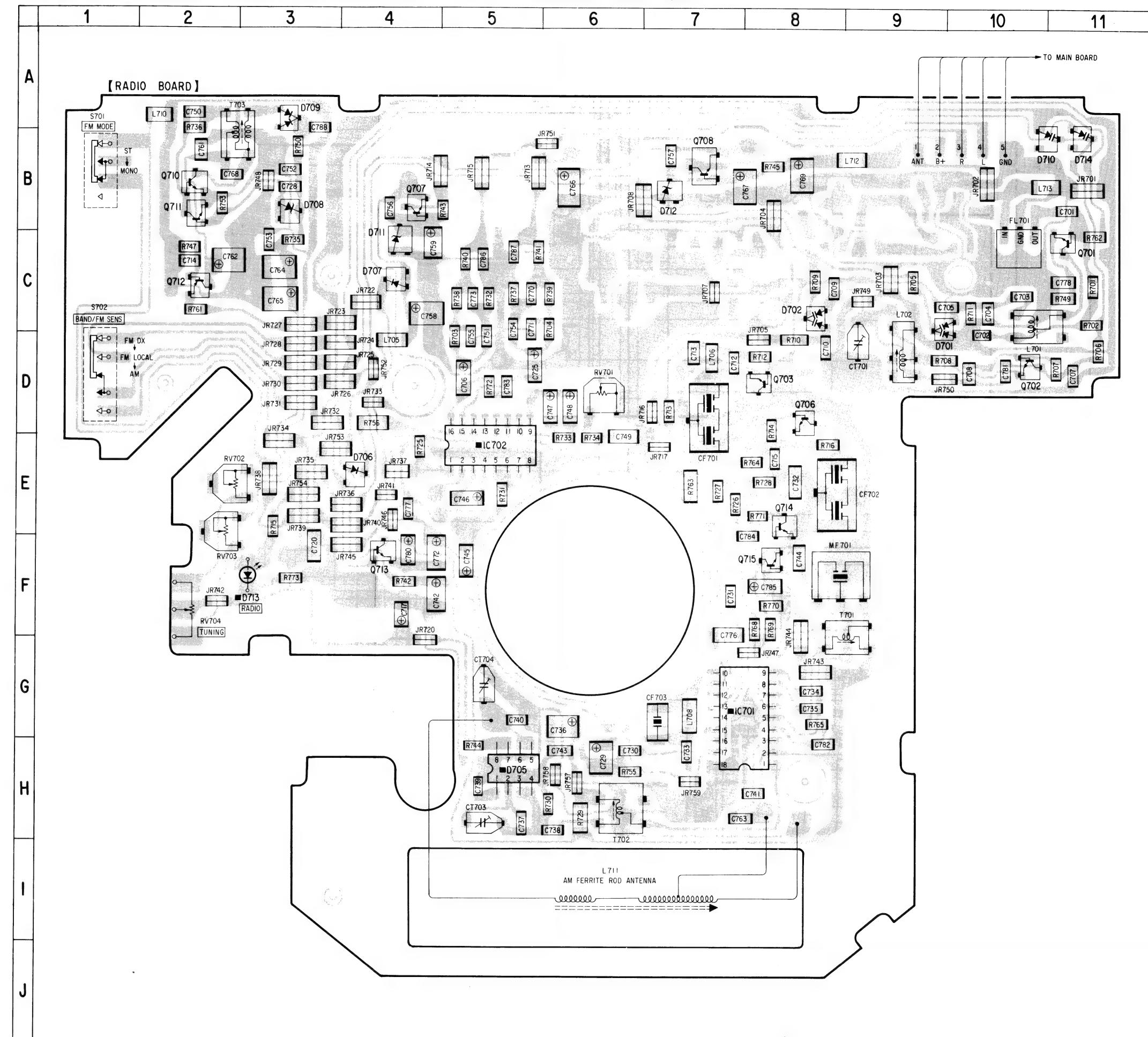
## 4-4. PRINTED WIRING BOARDS -RADIO SECTION- ● See page 13 for Semiconductors Lead Layouts

## ● Semiconductor Location

Ref. No.	Location
D701	C-10
D702	C-8
D705	H-5
D706	E-4
D707	C-4
D708	B-3
D709	A-3
D710	B-11
D711	C-4
D712	B-7
D713	F-13
D714	B-14
IC701	G-8
IC702	E-5
Q701	C-11
Q702	D-10
Q703	D-8
Q706	D-8
Q707	B-4
Q708	B-7
Q710	B-2
Q711	B-2
Q712	C-2
Q713	F-4
Q714	E-8
Q715	F-8

## Note:

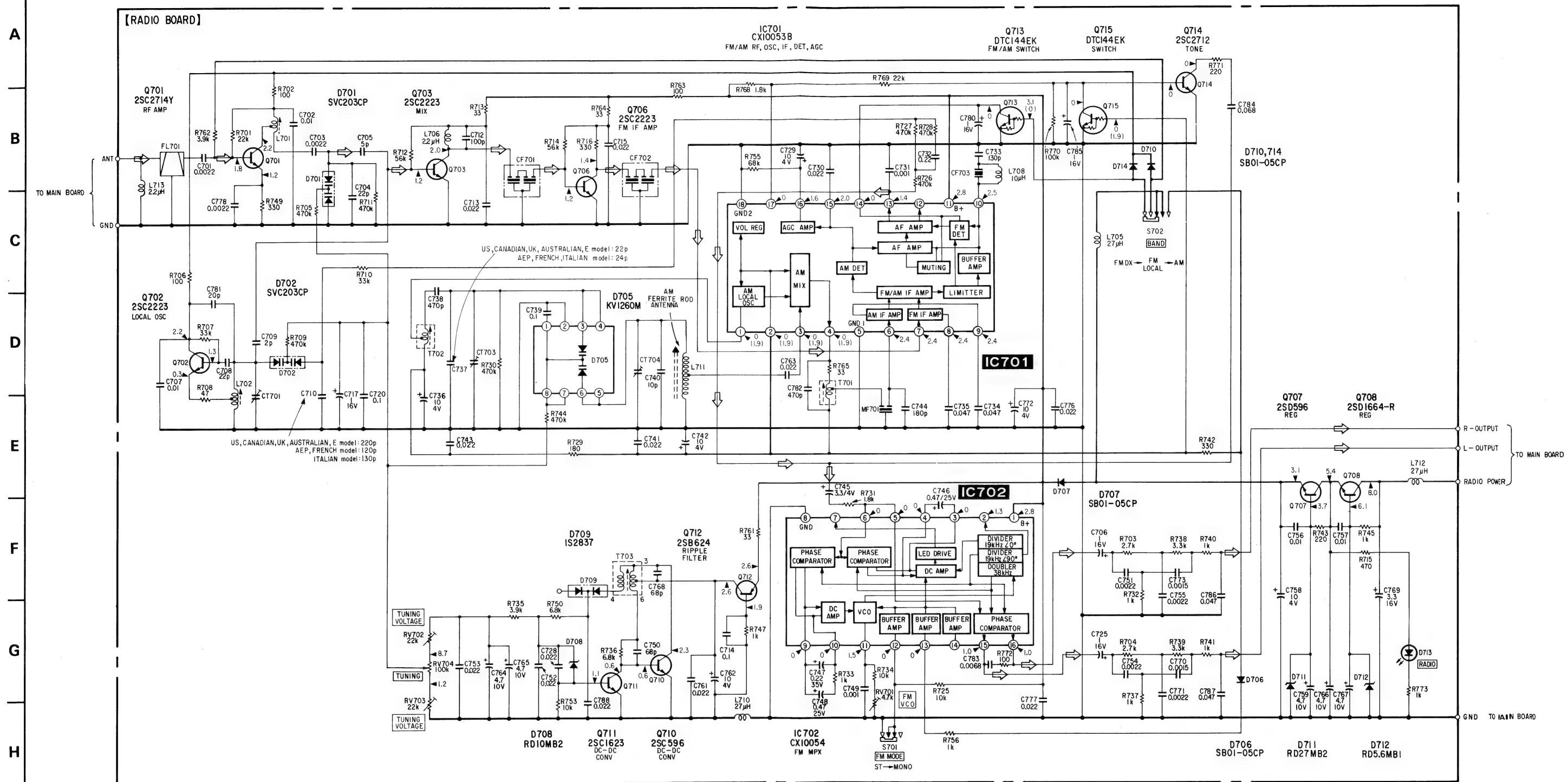
- ○ : parts extracted from the component side.
- ● : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- □ : Chip components extracted from the rear side.



## 4-5. SCHEMATIC DIAGRAM - RADIO SECTION -

● See page 20 for note.

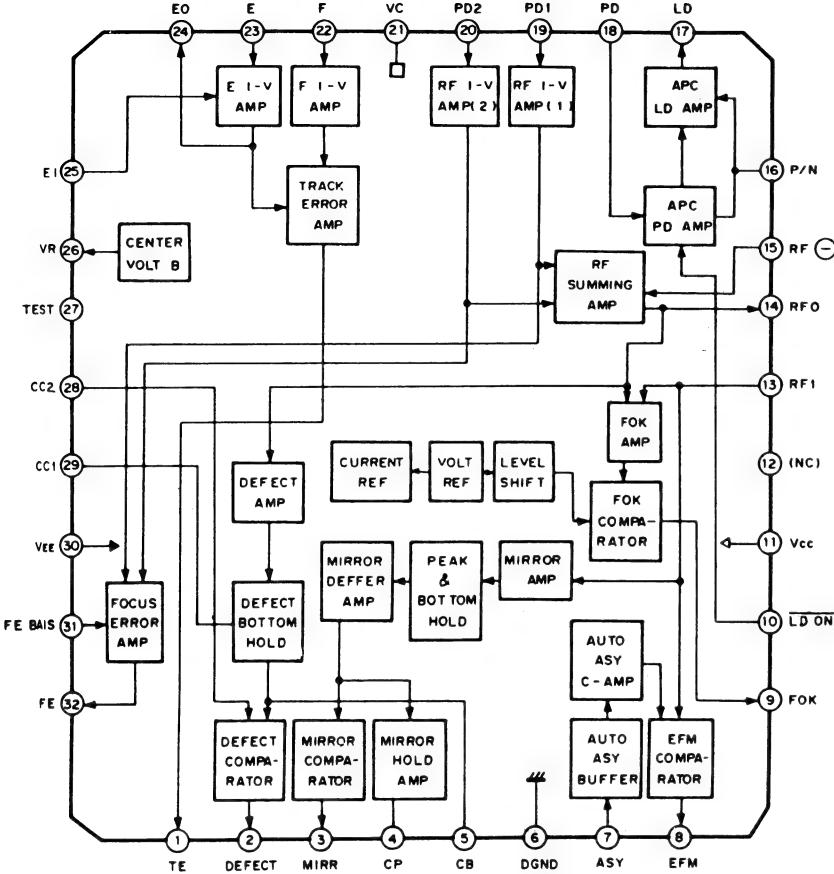
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



4-6. IC BLOCK DIAGRAM

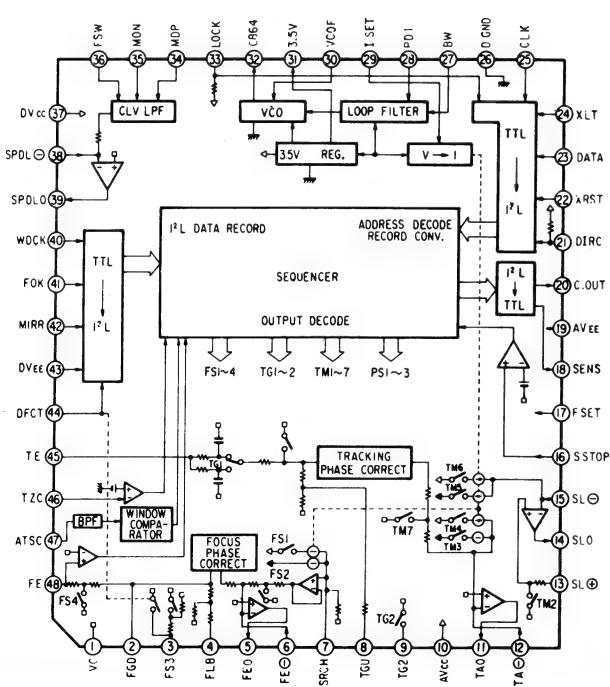
IC501

CXA1271Q



IC502

CXA1272Q-Z



## SECTION 5 EXPLODED VIEWS

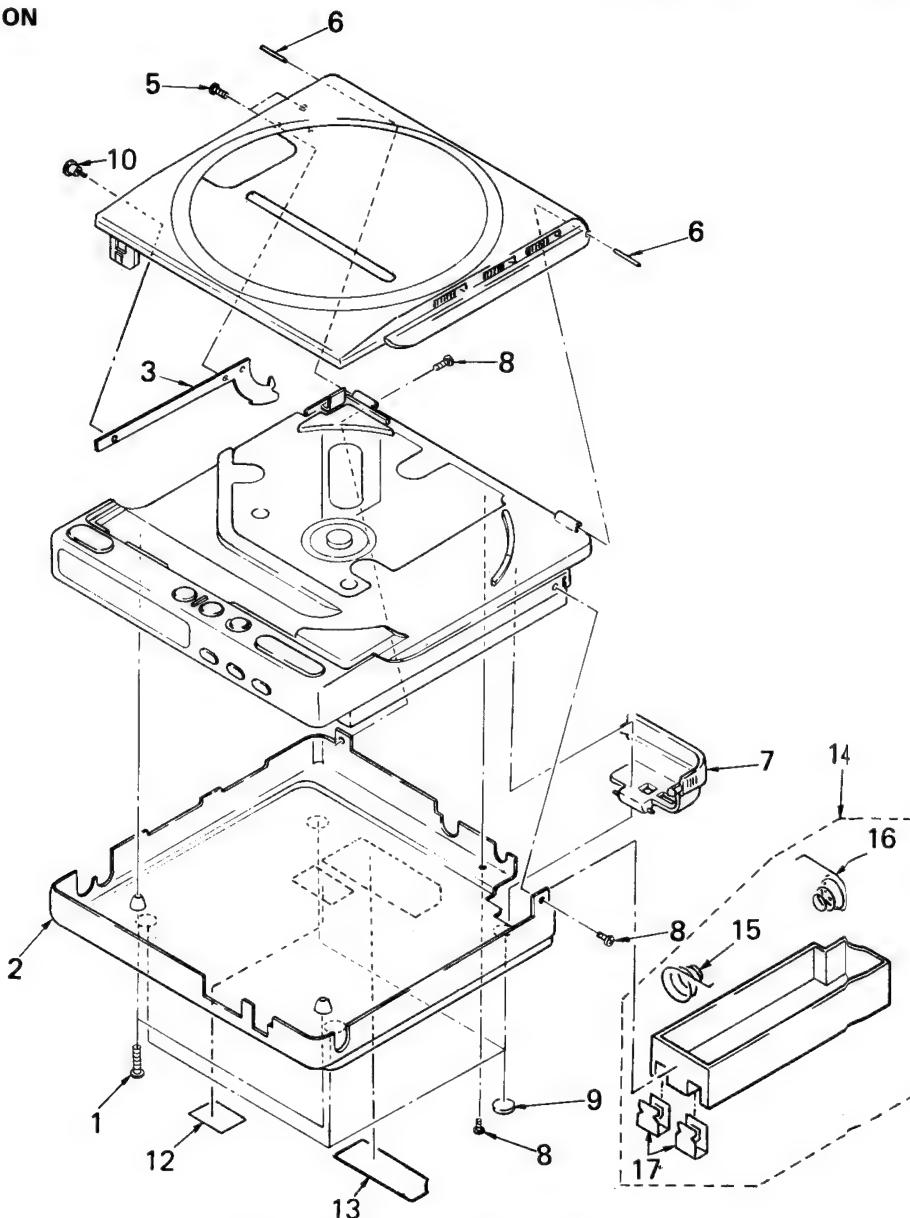
**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

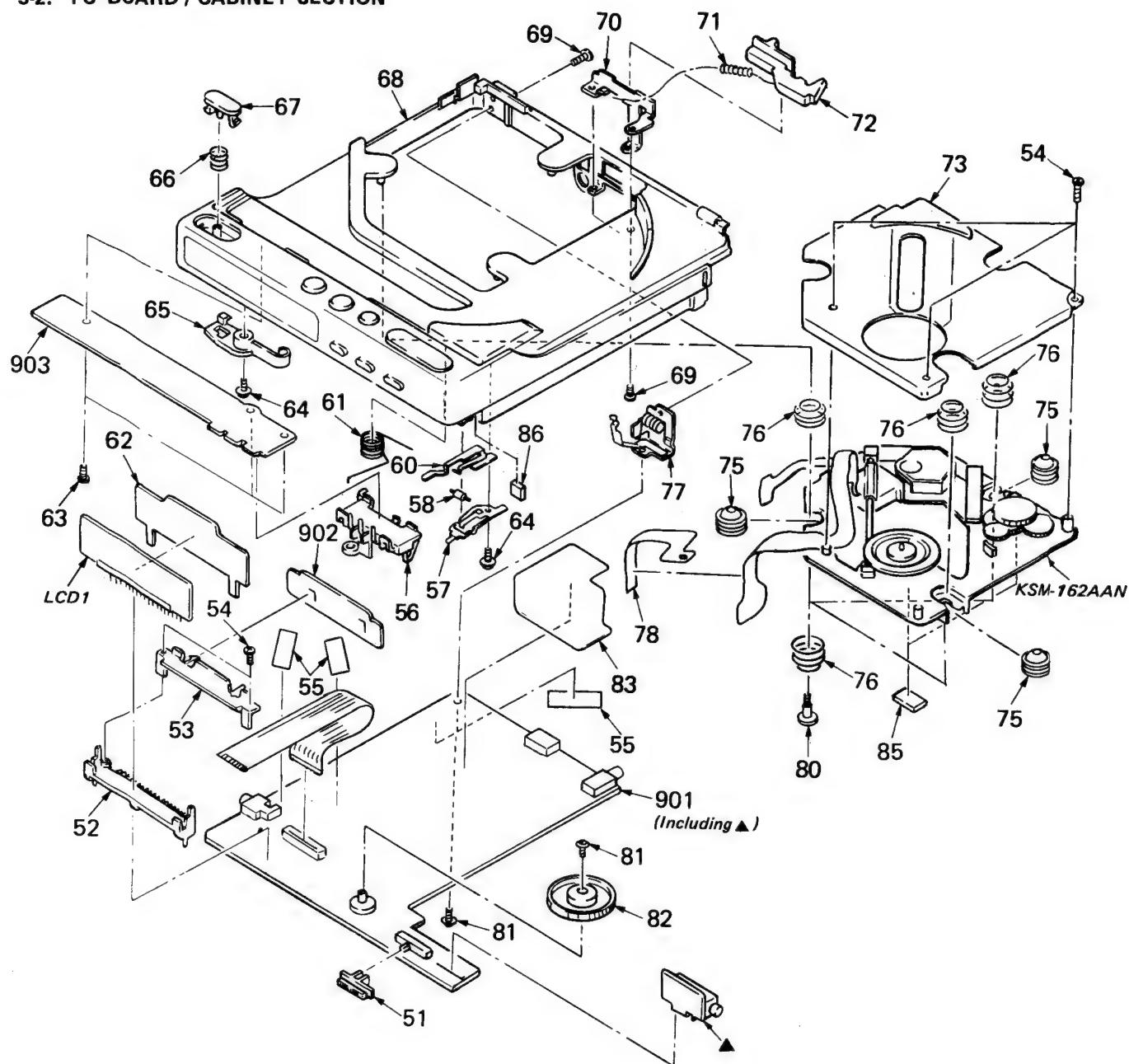
The components identified by mark or dotted line with mark are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

**5-1. BOTTOM PANEL SECTION**

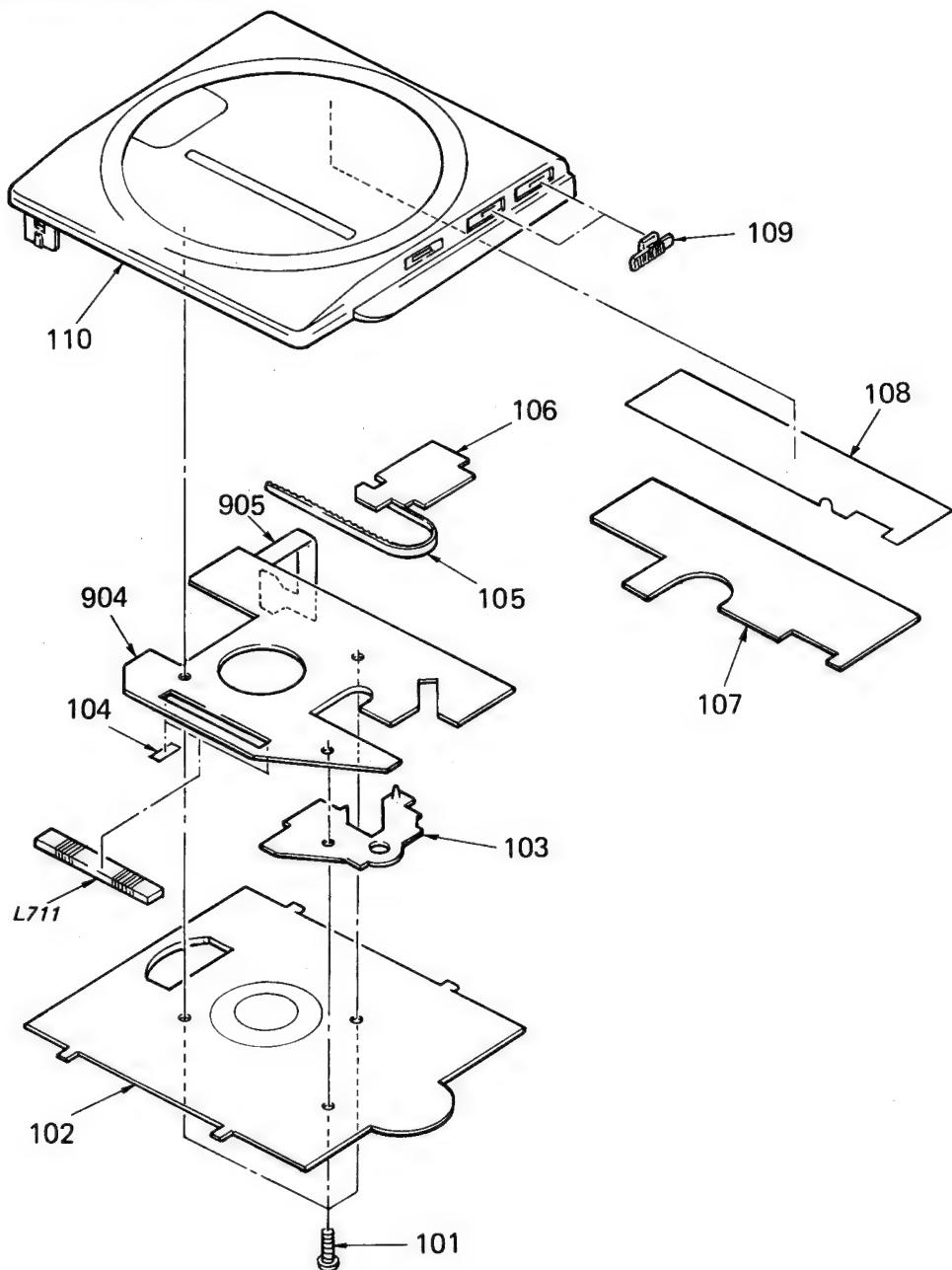
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-792-71	SCREW (B2X6), TAPPING, P1		13	*4-924-786-01	(AEP).....LABEL, MODEL NUMBER (AE5)	
2	X-4924-712-1	PLATE ASSY, BOTTOM			*4-924-788-01	(US,Canadian)...LABEL, MODEL NUMBER (U)	
3	4-924-713-01	ARM, SWITCHING			*4-926-601-01	(UK,E,French,Australian) ...LABEL, MODEL NUMBER (E)	
5	4-924-765-01	SCREW (M1.4), SPECIAL HEAD			*4-924-759-01	(Italian)...LABEL, MODEL NUMBER(ITI)	
6	4-924-714-01	SHAFT (FULCRUM)		14	X-4918-806-1	(UK)...CASE ASSY (BLACK), BATTERY	15-17
7	4-924-734-21	LID, BATTERY CASE		15	4-918-803-01	(UK)...SPRING	
8	3-703-816-52	SCREW (M1.4X3.5), SPECIAL HEAD		16	2-298-630-01	(UK)...SPRING (RIGHT)	
9	4-912-641-11	FOOT, RUBBER		17	4-918-814-01	(UK)...TERMINAL BOARD (B)	
10	3-329-697-11	SCREW, STEP, PRECISION					
12	*4-885-838-00	(AEP,UK,French,Italian)...LABEL, CLASS 1					

## **5-2. PC BOARD / CABINET SECTION**



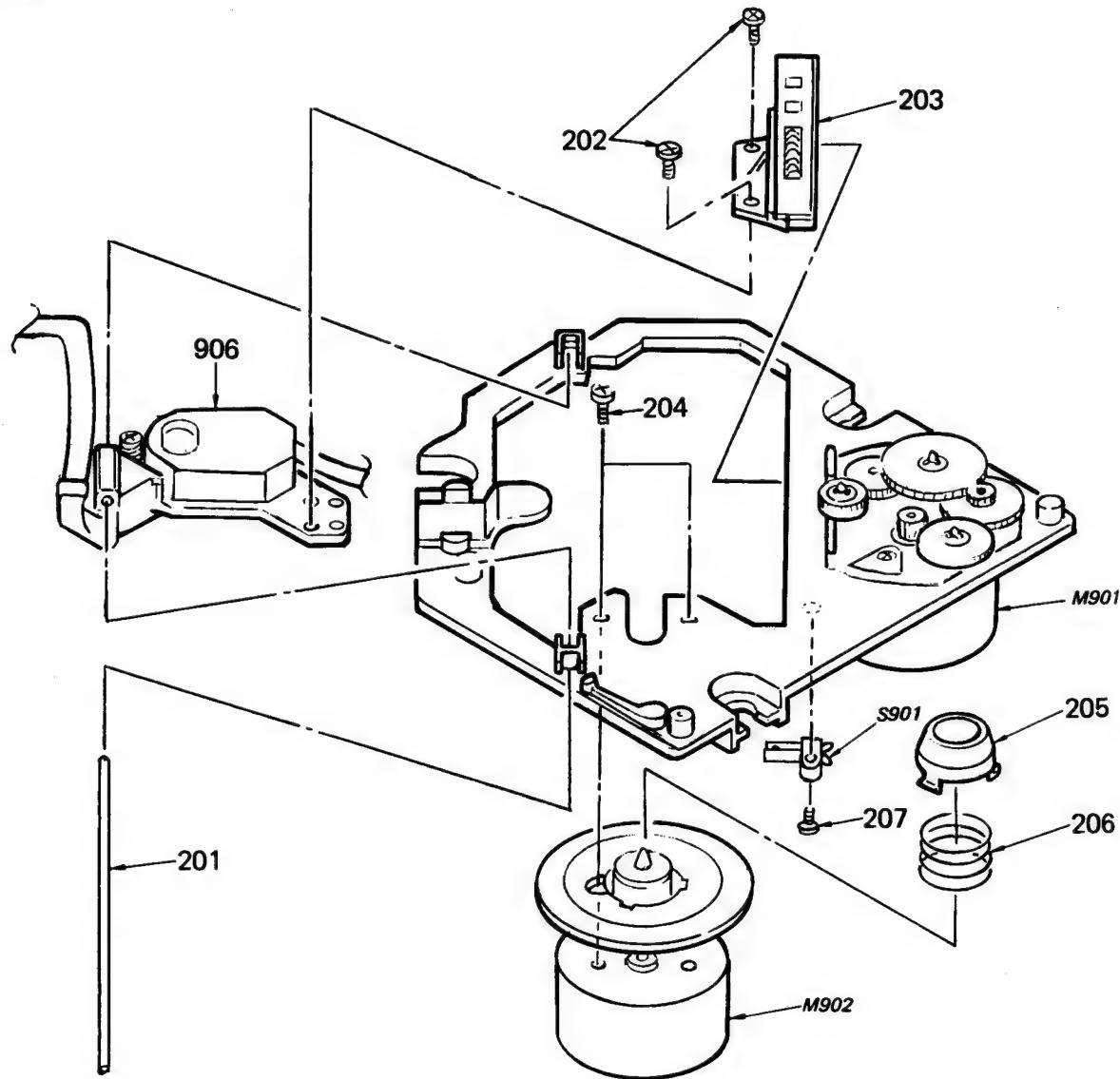
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-924-724-01	KNOB (HOLD)		70	*4-924-721-01	BRACKET, LOCK CLAW	
52	*4-924-730-01	HOLDER, LCD		71	3-565-923-00	SPRING, COMPRESSION	
53	*4-924-781-01	HOLDER (LED)		72	4-924-733-01	KNOB (LOCK CLAW)	
54	3-893-942-01	SCREW (1.7X4), TAPPING (B)		73	X-4924-702-1	COVER ASSY (BLACK), MD	
55	*3-561-902-00	CLOTH, RETAINING, CASSETTE		75	4-924-705-01	INSULATOR	
56	4-924-731-01	SPRING		76	4-924-710-01	SPRING, COMPRESSION	
57	4-924-763-01	SPRING (BSA)		77	*X-4924-701-1	SPRING ASSY, CLICK	
58	4-924-701-01	ROLLER, BS		78	4-924-761-01	PAPER (A), SHIELD	
60	4-924-702-01	SPRING (BSB)		80	4-924-718-01	SCREW, INSULATOR	
61	4-924-712-01	SPRING, TORSION		81	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK	
62	4-924-709-01	PLATE, LIGHT GUIDE		82	4-924-732-01	KNOB (VOLUME)	
63	4-908-792-71	SCREW (B2X6), TAPPING, P1		83	*4-924-784-01	SHEET, PROTECTION	
64	4-924-703-01	SCREW (B1.7X4), TAPPING					
65	4-924-711-01	CLAW, LID LOCK		85	9-911-839-XX	SPACER	
66	3-553-530-00	SPRING, COMPRESSION		86	*3-329-460-01	SPACER	
67	4-924-760-01	BUTTON (OPEN)		901	A-3015-626-A	PC BOARD ASSY, MAIN	
68	X-4924-711-1	CABINET ASSY		902	*1-626-480-11	PC BOARD, LED	
69	3-703-816-52	SCREW (M1.4X3.5), SPECIAL HEAD		903	*1-625-771-11	PC BOARD, CONTROL	

## 5-3. UPPER PANEL SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	3-893-942-01	SCREW (B1.7X4)		110	X-4924-713-1	(US,Canadian,UK,E,Australian)	
102	A-3039-654-A	COVER ASSY, TUNER			X-4924-714-1	....LID ASSY, UPPER (AEP,French,Italian).LID ASSY, UPPER	
103	*4-924-773-01	GUIDE, TU		904	A-3015-627-A	(US,Canadian,UK,E,Australian)	
104	3-831-441-XX	SPACER			A-3015-656-A	....PC BOARD ASSY, RADIO	
105	*4-924-771-01	RACK, POINTER			A-3015-673-A	(AEP,French)....PC BOARD ASSY, RADIO	
106	*4-918-884-01	SHEET, COVER		905	1-626-980-11	FREXIBLE BOARD, TU	
107	*4-924-774-01	PLATE (T), SHIELD		L711	1-402-381-11	ANTENNA, FERRITE-ROD (AM)	
108	*4-924-787-01	SHEET (SHIELD PAPER), ADHESIVE					
109	4-924-770-01	BUTTON (T MODE)					

**5-4. MECHANISM SECTION  
(KSM-162A)**



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	2-641-534-01	SHAFT		207	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
202	7-627-852-18	SCREW, PRECISION +P 1.7X4 TYPE3		906	△.8-848-081-21	PICKUP, OPTICAL KSS-162A	
203	X-2641-523-1	RACK ASSY		M901	X-2641-525-1	MOTOR ASSY	
204	7-627-552-88	SCREW, PRECISION +P 1.7X2.2		M902	X-2641-521-1	MOTOR ASSY, T.T.	
205	2-641-539-01	RING, CENTER		S901	1-570-112-11	SWITCH, LEAF (LIMIT SWITCH)	
206	2-641-524-01	SPRING (A), COMPRESSION					

**Note:**  
The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

**Note:**  
Les composants identifiés par une marque △ sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

## SECTION 6

### ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

**CAPACITORS:**MF:  $\mu$ F, PF:  $\mu\mu$ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

**COILS**

- MMH: mH, UH:  $\mu$ H

**SEMICONDUCTORS**In each case, U:  $\mu$ , for example:UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,UPC...:  $\mu$ PC, UPD...:  $\mu$ PD...

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description		
901	A-3015-626-A	PC BOARD ASSY, MAIN			C404	1-163-111-00	CERAMIC CHIP	56PF	5%
902	*1-626-480-11	PC BOARD, LED			C405	1-163-125-00	CERAMIC CHIP	220PF	5%
903	*1-625-771-11	PC BOARD, CONTROL			C406	1-124-584-00	ELECT	100MF	20%
904	A-3015-627-A	(US,Canadian,UK,E,Australian) ...PC BOARD ASSY, RADIO			C407	1-124-257-00	ELECT	2.2MF	20%
	A-3015-656-A	(AEP,French)...PC BOARD ASSY, RADIO			C411	1-126-157-11	ELECT	10MF	20%
	A-3015-673-A	(Italian).....PC BOARD ASSY, RADIO			C412	1-126-094-11	ELECT	4.7MF	20%
905	1-626-980-11	FREXIBLE BOARD, TU			C414	1-126-157-11	ELECT	10MF	20%
906	▲.8-848-081-21	PICKUP, OPTICAL KSS-162A			C416	1-124-234-00	ELECT	22MF	20%
C101	1-163-086-00	CERAMIC CHIP 3PF	0.25PF	50V	C417	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C102	1-126-157-11	ELECT 10MF	20%	16V	C418	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C103	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V	C419	1-135-092-21	TANTAL. CHIP	3.3MF	20%
C104	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V	C420	1-135-092-21	TANTAL. CHIP	3.3MF	20%
C105	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	C421	1-163-017-00	CERAMIC CHIP	0.0047MF	10%
C106	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	C422	1-163-137-00	CERAMIC CHIP	680PF	5%
C107	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C423	1-162-638-11	CERAMIC CHIP	1MF	16V
C108	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C424	1-163-135-00	CERAMIC CHIP	560PF	5%
C109	1-124-584-00	ELECT 100MF	20%	10V	C425	1-163-021-00	CERAMIC CHIP	0.01MF	10%
C110	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C426	1-162-638-11	CERAMIC CHIP	1MF	16V
C201	1-163-086-00	CERAMIC CHIP 3PF	0.25PF	50V	C427	1-163-075-00	CERAMIC CHIP	0.047MF	10%
C202	1-126-157-11	ELECT 10MF	20%	16V	C429	1-162-638-11	CERAMIC CHIP	1MF	16V
C203	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V	C430	1-135-099-00	TANTAL. CHIP	2.2MF	20%
C204	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V	C501	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C205	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	C502	1-163-021-00	CERAMIC CHIP	0.01MF	10%
C206	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	C503	1-124-431-00	ELECT	33MF	20%
C207	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C505	1-163-078-11	CERAMIC CHIP	0.033MF	10%
C208	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C506	1-163-021-00	CERAMIC CHIP	0.01MF	10%
C209	1-124-584-00	ELECT 100MF	20%	10V	C507	1-135-070-00	TANTAL. CHIP	0.1MF	20%
C210	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C508	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C301	1-124-584-00	ELECT 100MF	20%	10V	C509	1-124-431-00	ELECT	33MF	20%
C302	1-124-584-00	ELECT 100MF	20%	10V	C510	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C305	1-126-157-11	ELECT 10MF	20%	16V	C511	1-163-021-00	CERAMIC CHIP	0.01MF	10%
C306	1-124-584-00	ELECT 100MF	20%	10V	C512	1-124-584-00	ELECT	100MF	20%
C307	1-124-584-00	ELECT 100MF	20%	10V	C513	1-124-431-00	ELECT	33MF	20%
C308	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C514	1-163-095-00	CERAMIC CHIP	12PF	5%
C309	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C515	1-163-181-00	CERAMIC CHIP	100PF	5%
C311	1-135-092-21	TANTAL. CHIP 3.3MF	20%	16V	C516	1-163-038-00	CERAMIC CHIP	0.1MF	25V
C312	1-135-092-21	TANTAL. CHIP 3.3MF	20%	16V	C517	1-163-038-00	CERAMIC CHIP	0.1MF	10%
C321	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C518	1-163-021-00	CERAMIC CHIP	0.01MF	25V
C322	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V	C519	1-163-038-00	CERAMIC CHIP	0.1MF	10%
C323	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C520	1-163-037-11	CERAMIC CHIP	0.022MF	25V
C324	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C521	1-163-117-00	CERAMIC CHIP	100PF	5%
C401	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C522	1-124-239-00	ELECT	6.8MF	20%
C402	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C523	1-124-239-00	ELECT	6.8MF	20%
C403	1-126-357-11	ELECT 150MF	20%	16V	C524	1-126-153-11	ELECT	22MF	20%
					C525	1-163-038-00	CERAMIC CHIP	0.1MF	25V

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description	
C527	1-163-081-00	CERAMIC CHIP 0.22MF	25V		C714	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C528	1-126-153-11	ELECT 22MF	20%	6.3V	C715	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C529	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C717	1-135-091-00	TANTAL. CHIP 1MF	16V
C531	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C720	1-163-077-00	CERAMIC CHIP 0.1MF	25V
C532	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C725	1-135-091-00	TANTAL. CHIP 1MF	16V
C533	1-162-638-11	CERAMIC CHIP 1MF	16V		C728	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C534	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C729	1-135-157-21	TANTAL. CHIP 10MF	4V
C535	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	C730	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C536	1-163-078-11	CERAMIC CHIP 0.033MF	10%	25V	C731	1-163-141-00	CERAMIC CHIP 0.001MF	50V
C537	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V	C732	1-163-081-00	CERAMIC CHIP 0.22MF	25V
C538	1-124-434-00	ELECT 220MF	20%	4V	C733	1-163-120-00	CERAMIC CHIP 130PF	50V
C539	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	C734	1-163-809-11	CERAMIC CHIP 0.047MF	25V
C540	1-162-637-11	CERAMIC CHIP 0.47MF	16V		C735	1-163-809-11	CERAMIC CHIP 0.047MF	25V
C543	1-124-255-00	ELECT 1MF	20%	50V	C736	1-135-157-21	TANTAL. CHIP 10MF	4V
C544	1-126-157-11	ELECT 10MF	20%	16V	C737	1-163-101-00	(US,Canadian,UK,E,Australian) ..CERAMIC CHIP 22PF	5% 50V
C546	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V	C737	1-163-102-00	(AEP,French,Italian) ..CERAMIC CHIP 24PF	5% 50V
C547	1-162-638-11	CERAMIC CHIP 1MF	16V					
C548	1-126-162-11	ELECT 3.3MF	20%	50V				
C549	1-126-157-11	ELECT 10MF	20%	16V	C738	1-163-133-00	CERAMIC CHIP 470PF	50V
C550	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	C739	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C551	1-126-157-11	ELECT 10MF	20%	16V	C740	1-163-093-00	CERAMIC CHIP 10PF	50V
C552	1-124-255-00	ELECT 1MF	20%	50V	C741	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C553	1-162-638-11	CERAMIC CHIP 1MF	16V		C742	1-135-104-00	TANTAL. CHIP 10MF	4V
C554	1-162-637-11	CERAMIC CHIP 0.47MF	16V		C743	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C555	1-163-081-00	CERAMIC CHIP 0.22MF	25V		C744	1-163-123-00	CERAMIC CHIP 180PF	50V
C556	1-163-143-00	CERAMIC CHIP 0.0012MF	10%	50V	C745	1-135-103-00	TANTAL. CHIP 3.3MF	20% 4V
C557	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	C746	1-135-145-11	TANTAL. CHIP 0.47MF	25V
C558	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C747	1-135-072-21	TANTAL. CHIP 0.22MF	35V
C559	1-124-584-00	ELECT 100MF	20%	10V	C748	1-135-145-11	TANTAL. CHIP 0.47MF	25V
C561	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C749	1-163-205-00	CERAMIC CHIP 0.001MF	50V
C562	1-162-638-11	CERAMIC CHIP 1MF	16V		C750	1-163-113-00	CERAMIC CHIP 68PF	50V
C601	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C751	1-163-013-00	CERAMIC CHIP 0.0022MF	50V
C602	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C752	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C603	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C753	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C604	1-163-038-00	CERAMIC CHIP 0.1MF	25V		C754	1-163-013-00	CERAMIC CHIP 0.0022MF	25V
C605	1-162-638-11	CERAMIC CHIP 1MF	16V		C755	1-163-013-00	CERAMIC CHIP 0.0022MF	25V
C606	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C756	1-163-021-00	CERAMIC CHIP 0.01MF	50V
C607	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C757	1-163-021-00	CERAMIC CHIP 0.01MF	50V
C701	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	C758	1-135-157-21	TANTAL. CHIP 10MF	4V
C702	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C759	1-135-096-21	TANTAL. CHIP 4.7MF	10V
C703	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	C761	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C704	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C762	1-135-157-21	TANTAL. CHIP 10MF	4V
C705	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	C763	1-163-037-11	CERAMIC CHIP 0.022MF	25V
C706	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	C764	1-135-096-21	TANTAL. CHIP 4.7MF	10V
C707	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	C765	1-135-096-21	TANTAL. CHIP 4.7MF	10V
C708	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C766	1-135-096-21	TANTAL. CHIP 4.7MF	10V
C709	1-163-085-00	CERAMIC CHIP 2PF	0.25PF	50V	C767	1-135-096-21	TANTAL. CHIP 4.7MF	10V
C710	1-163-125-00	(US,Canadian,UK,E,Australian) ..CERAMIC CHIP 220PF	5%	50V	C768	1-163-113-00	CERAMIC CHIP 68PF	50V
C710	1-163-119-00	(AEP,French)..CERAMIC CHIP 120PF	5%	50V	C769	1-135-092-21	TANTAL. CHIP 3.3MF	16V
C710	1-163-120-00	(Italian)....CERAMIC CHIP 130PF	5%	50V	C770	1-163-145-00	CERAMIC CHIP 0.0015MF	50V
C712	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C771	1-163-013-00	CERAMIC CHIP 0.0022MF	50V
C713	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	C772	1-135-157-21	TANTAL. CHIP 10MF	4V
					C773	1-163-145-00	CERAMIC CHIP 0.0015MF	50V
					C774	1-163-063-00	CERAMIC CHIP 0.022MF	50V
					C775	1-163-037-11	CERAMIC CHIP 0.022MF	25V
					C776	1-135-091-00	TANTAL. CHIP 1MF	16V

Ref.No.	Part No.	Description			Ref.No.	Part No.	Description
C781	1-163-100-00	CERAMIC CHIP 20PF	5%	50V	D702	8-719-939-02	DIODE SVC203CP
C782	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	D705	8-719-928-03	DIODE KV1260M
C783	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	D706	8-719-938-72	DIODE SB01-05CP
C784	1-163-036-00	CERAMIC CHIP 0.068MF		50V	D707	8-719-938-72	DIODE SB01-05CP
C785	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	D708	8-719-106-53	DIODE RD10M-B2
C786	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D709	8-719-100-05	DIODE 1S2837
C787	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	D710	8-719-938-72	DIODE SB01-05CP
C788	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	D711	8-719-105-32	DIODE RD2.7M-B2
C801	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	D712	8-719-105-90	DIODE RD5.6M-B1
C802	1-163-038-00	CERAMIC CHIP 0.1MF		25V	D713	8-719-928-16	DIODE SLM-13VW
C803	1-124-257-00	ELECT 2.2MF	20%	50V	D714	8-719-938-72	DIODE SB01-05CP
C804	1-124-257-00	ELECT 2.2MF	20%	50V	D801	8-719-951-22	DIODE IMN10
C805	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	D803	8-719-951-22	DIODE IMN10
C806	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	D804	8-719-100-05	DIODE 1S2837
C807	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	D805	8-719-106-70	DIODE RD12M-B1
C808	1-162-638-11	CERAMIC CHIP 1MF		16V	D806	8-719-100-05	DIODE 1S2837
C809	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	D807	8-719-100-05	DIODE 1S2837
C810	1-162-638-11	CERAMIC CHIP 1MF		16V	D808	8-719-100-03	DIODE 1S2835
C811	1-163-038-00	CERAMIC CHIP 0.1MF		25V	D809	8-719-100-03	DIODE 1S2835
CF701	1-567-338-65	FILTER, CERAMIC			D810	8-719-911-19	DIODE ISS119
CF702	1-567-338-65	FILTER, CERAMIC			FL701	1-236-053-11	FILTER, BAND PASS
CF703	1-567-338-65	FILTER, CERAMIC			IC301	8-759-805-34	IC CXD1161M-3
CN301	1-563-995-11	CONNECTOR, FPC (ZIF) 5P			IC302	8-759-630-75	IC M51568FP
CN501	1-566-976-11	SOCKET, CONNECTOR 12P			IC303	8-759-745-64	IC NJM4560M
CN502	1-565-309-11	CONNECTOR, FLEXIBLE 4P			IC401	8-759-939-07	IC BA9700F
CN801	1-563-589-11	CONNECTOR, FLEXIBLE 12P			IC501	8-752-033-55	IC CXA1271Q
CN802	1-563-615-11	CONNECTOR, FLEXIBLE 12P			IC502	8-752-033-54	IC CXA1272Q-Z
CNJ401	1-562-961-11	JACK (DC IN 9V)			IC503	8-759-970-89	IC BA10358F
CT701	1-141-313-11	CAP, VAR, TRIMMER (CHIP TYPE)			IC504	8-759-030-17	IC MPC1715
CT703	1-141-313-11	CAP, VAR, TRIMMER (CHIP TYPE)			IC505	8-759-230-43	IC TC7S04F
CT704	1-141-313-11	CAP, VAR, TRIMMER (CHIP TYPE)			IC601	8-759-947-03	IC CXD1130Q
D322	8-719-938-72	DIODE SB01-05CP			IC602	8-759-320-44	IC CXK5816M-10L
D401	8-719-938-78	DIODE SB10-05PCP			IC701	8-759-923-96	IC CX10053B
D402	8-719-106-22	DIODE RD7.5M-B1			IC702	8-759-910-53	IC CX10054
D403	8-719-938-78	DIODE SB10-05PCP			IC801	8-752-804-07	IC CXP5086-026Q
D405	8-719-938-78	DIODE SB10-05PCP			IC802	8-759-700-07	IC NJM2903M
D406	8-719-101-23	DIODE ISS123			J301	1-565-310-11	JACK (LINE OUT)
D407	8-719-100-05	DIODE 1S2837			J302	1-565-311-11	JACK (PHONES)
D409	8-719-938-75	DIODE SB05-05CP			J801	1-562-870-31	JACK (REMOTE)
D410	8-719-938-78	DIODE SB10-05PCP			JR303	1-216-295-00	METAL GLAZE 0 5% 1/10W
D411	8-719-927-82	DIODE SLP478C			JR304	1-216-295-00	METAL GLAZE 0 5% 1/10W
D412	8-719-100-05	DIODE 1S2837			JR305	1-216-296-00	METAL GLAZE 0 5% 1/8W
D413	8-719-938-75	DIODE SB05-05CP			JR307	1-216-295-00	METAL GLAZE 0 5% 1/10W
D415	8-719-927-82	DIODE SLP478C			JR401	1-216-295-00	METAL GLAZE 0 5% 1/10W
D416	8-719-927-82	DIODE SLP478C			JR402	1-216-295-00	METAL GLAZE 0 5% 1/10W
D417	8-719-927-82	DIODE SLP478C			JR403	1-216-295-00	METAL GLAZE 0 5% 1/10W
D418	8-719-105-91	DIODE RD5.6M-B2			JR404	1-216-295-00	METAL GLAZE 0 5% 1/10W
D419	8-719-938-72	DIODE SB01-05CP			JR406	1-216-296-00	METAL GLAZE 0 5% 1/8W
D420	8-719-108-12	DIODE RD9.1EW			JR501	1-216-295-00	METAL GLAZE 0 5% 1/10W
D501	8-719-938-72	DIODE SB01-05CP			JR502	1-216-295-00	METAL GLAZE 0 5% 1/10W
D502	8-719-938-72	DIODE SB01-05CP			JR701	1-216-296-00	METAL GLAZE 0 5% 1/8W
D503	8-719-938-72	DIODE SB01-05CP			JR702	1-216-296-00	METAL GLAZE 0 5% 1/8W
D504	8-719-106-53	DIODE RD10M-B2			JR703	1-216-296-00	METAL GLAZE 0 5% 1/8W
D505	8-719-100-05	DIODE 1S2837			JR704	1-216-296-00	METAL GLAZE 0 5% 1/8W
D506	8-719-108-12	DIODE RD9.1EW			JR705	1-216-295-00	METAL GLAZE 0 5% 1/10W
D507	8-719-911-19	DIODE ISS119			JR707	1-216-295-00	METAL GLAZE 0 5% 1/10W
D601	8-719-100-05	DIODE 1S2837			JR708	1-216-296-00	METAL GLAZE 0 5% 1/8W
D701	8-719-939-02	DIODE SVC203CP					

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
JR713	1-216-296-00	METAL GLAZE 0 5% 1/8W	L701	1-459-641-11	COIL (WITH CORE)
JR714	1-216-296-00	METAL GLAZE 0 5% 1/8W	L702	1-459-642-11	COIL (WITH CORE)
JR715	1-216-296-00	METAL GLAZE 0 5% 1/8W	L705	1-410-209-51	INDUCTOR CHIP 27UH
JR716	1-216-295-00	METAL GLAZE 0 5% 1/10W	L706	1-410-196-11	INDUCTOR CHIP 2.2UH
JR717	1-216-295-00	METAL GLAZE 0 5% 1/10W	L708	1-410-204-31	INDUCTOR CHIP 10UH
JR720	1-216-295-00	METAL GLAZE 0 5% 1/10W	L710	1-410-209-51	INDUCTOR CHIP 27UH
JR722	1-216-296-00	METAL GLAZE 0 5% 1/8W	L711	1-402-381-11	ANTENNA, FERRITE-ROD (MW)
JR723	1-216-296-00	METAL GLAZE 0 5% 1/8W	L712	1-410-209-51	INDUCTOR CHIP 27UH
JR724	1-216-296-00	METAL GLAZE 0 5% 1/8W	L713	1-410-196-11	INDUCTOR CHIP 2.2UH
JR725	1-216-296-00	METAL GLAZE 0 5% 1/8W	LCD1	1-808-354-11	LCD MODULE
JR726	1-216-296-00	METAL GLAZE 0 5% 1/8W	M901	X-2641-525-1	MOTOR ASSY (SLED)
JR727	1-216-296-00	METAL GLAZE 0 5% 1/8W	M902	X-2641-521-1	MOTOR ASSY, T.T. (SPINDLE)
JR728	1-216-296-00	METAL GLAZE 0 5% 1/8W	MF701	1-567-693-11	FILTER, CERAMIC
JR729	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q301	8-729-800-36	TRANSISTOR 2SD1048
JR730	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q302	8-729-800-36	TRANSISTOR 2SD1048
JR731	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q303	8-729-800-36	TRANSISTOR 2SD1048
JR732	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q304	8-729-800-36	TRANSISTOR 2SD1048
JR733	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q305	8-729-800-36	TRANSISTOR 2SD1048
JR734	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q306	8-729-800-36	TRANSISTOR 2SD1048
JR735	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q307	8-729-800-36	TRANSISTOR 2SD1048
JR736	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q401	8-729-901-45	TRANSISTOR DTA114YK
JR737	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q402	8-729-902-99	TRANSISTOR DTC114TK
JR738	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q403	8-729-162-44	TRANSISTOR 2SB624-BV4
JR739	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q404	9-989-161-01	TRANSISTOR 2SC2412K
JR740	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q405	8-729-800-36	TRANSISTOR 2SD1048
JR741	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q406	9-989-161-01	TRANSISTOR 2SC2412K
JR742	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q407	8-729-806-75	TRANSISTOR 2SB1120
JR743	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q408	8-729-901-00	TRANSISTOR DTC124EK
JR744	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q409	8-729-100-76	TRANSISTOR 2SA812
JR745	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q410	8-729-162-44	TRANSISTOR 2SB624-BV4
JR746	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q412	8-729-800-36	TRANSISTOR 2SD1048
JR747	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q413	8-729-806-75	TRANSISTOR 2SB1120
JR748	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q414	8-729-903-10	TRANSISTOR FMW1
JR749	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q418	8-729-901-00	TRANSISTOR DTC124EK
JR750	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q419	8-729-901-00	TRANSISTOR DTC124EK
JR751	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q420	9-989-161-01	TRANSISTOR 2SC2412K
JR752	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q421	8-729-901-05	TRANSISTOR DTA124EK
JR753	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q422	8-729-800-36	TRANSISTOR 2SD1048
JR754	1-216-296-00	METAL GLAZE 0 5% 1/8W	Q423	8-729-907-28	TRANSISTOR IMD3
JR755	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q424	8-729-903-10	TRANSISTOR FMW1
JR756	1-216-295-00	METAL GLAZE 0 5% 1/10W	Q501	8-729-100-76	TRANSISTOR 2SA812
L101	1-410-196-11	INDUCTOR CHIP 2.2UH	Q502	8-729-800-36	TRANSISTOR 2SD1048
L102	1-410-196-11	INDUCTOR CHIP 2.2UH	Q503	8-729-902-99	TRANSISTOR DTC114TK
L201	1-410-196-11	INDUCTOR CHIP 2.2UH	Q504	9-989-161-01	TRANSISTOR 2SC2412K
L202	1-410-196-11	INDUCTOR CHIP 2.2UH	Q506	8-729-903-29	TRANSISTOR DTA144TK
L301	1-410-196-11	INDUCTOR CHIP 2.2UH	Q701	8-729-200-87	TRANSISTOR 2SC2714Y
L302	1-410-196-11	INDUCTOR CHIP 2.2UH	Q702	8-729-102-07	TRANSISTOR 2SC2223-F13
L401	1-459-842-11	COIL (WITH CORE)	Q703	8-729-102-08	TRANSISTOR 2SC2223-F14
L402	1-412-038-11	INDUCTOR CHIP 100UH	Q706	8-729-102-08	TRANSISTOR 2SC2223-F14
L403	1-412-037-11	INDUCTOR CHIP 47UH	Q707	8-729-159-64	TRANSISTOR 2SD596
L501	1-412-036-11	INDUCTOR CHIP 10UH	Q708	8-729-903-62	TRANSISTOR 2SD1664-Q
L502	1-412-039-51	INDUCTOR CHIP 100UH	Q710	8-729-159-64	TRANSISTOR 2SD596
L503	1-412-038-11	INDUCTOR CHIP 100UH	Q711	8-729-102-26	TRANSISTOR 2SC1623
L504	1-412-038-11	INDUCTOR CHIP 100UH	Q712	8-729-100-66	TRANSISTOR 2SB624BV4
L505	1-412-039-51	INDUCTOR CHIP 100UH	Q713	8-729-901-01	TRANSISTOR DTC144EK
L506	1-412-036-11	INDUCTOR CHIP 10UH			

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
Q714	8-729-100-66	TRANSISTOR 2SC1623				R407	1-216-089-00	METAL GLAZE	47K	5%	1/10W
Q715	8-729-901-01	TRANSISTOR DTC144EK				R408	1-216-049-00	METAL GLAZE	1K	5%	1/10W
Q801	8-729-901-05	TRANSISTOR DTA124EK				R409	1-216-077-00	METAL GLAZE	15K	5%	1/10W
Q802	8-729-800-36	TRANSISTOR 2SD1048				R410	1-216-083-00	METAL GLAZE	27K	5%	1/10W
Q803	8-729-907-28	TRANSISTOR IMD3				R411	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R101	1-216-329-11	METAL GLAZE	5.1K	1%	1/10W	R412	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R102	1-216-336-11	METAL GLAZE	47K	1%	1/10W	R413	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R103	1-216-333-11	METAL GLAZE	15K	1%	1/10W	R414	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R104	1-218-160-11	METAL GLAZE	43K	1%	1/10W	R415	1-216-339-11	METAL GLAZE	18K	1%	1/10W
R105	1-216-328-11	METAL GLAZE	4.3K	1%	1/10W	R416	1-216-335-11	METAL GLAZE	24K	1%	1/10W
R106	1-216-333-11	METAL GLAZE	15K	1%	1/10W	R417	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R107	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	R418	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R108	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R419	1-216-045-00	METAL GLAZE	680	5%	1/10W
R109	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R420	1-216-041-00	METAL GLAZE	470	5%	1/10W
R110	1-216-009-00	METAL GLAZE	22	5%	1/10W	R421	1-216-092-00	METAL GLAZE	62K	5%	1/10W
R111	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R422	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R112	1-216-033-00	METAL GLAZE	220	5%	1/10W	R423	1-216-045-00	METAL GLAZE	680	5%	1/10W
R113	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R424	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R114	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R425	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R115	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R426	1-216-033-00	METAL GLAZE	220	5%	1/10W
R116	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R427	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R201	1-216-329-11	METAL GLAZE	5.1K	1%	1/10W	R428	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W
R202	1-216-336-11	METAL GLAZE	47K	1%	1/10W	R429	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R203	1-216-333-11	METAL GLAZE	15K	1%	1/10W	R430	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R204	1-218-160-11	METAL GLAZE	43K	1%	1/10W	R431	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R205	1-216-328-11	METAL GLAZE	4.3K	1%	1/10W	R432	1-216-043-00	METAL GLAZE	560	5%	1/10W
R206	1-216-333-11	METAL GLAZE	15K	1%	1/10W	R434	1-216-043-00	METAL GLAZE	560	5%	1/10W
R207	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	R436	1-216-694-11	METAL CHIP	62K	0.50%	1/10W
R208	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R437	1-216-686-11	METAL CHIP	30K	0.50%	1/10W
R209	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R438	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R210	1-216-009-00	METAL GLAZE	22	5%	1/10W	R439	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R211	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R440	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R212	1-216-182-00	METAL GLAZE	220	5%	1/8W	R441	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R213	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R442	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R214	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	R443	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R215	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R446	1-216-009-00	METAL GLAZE	22	5%	1/10W
R216	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R448	1-216-041-00	METAL GLAZE	470	5%	1/10W
R303	1-216-121-00	METAL GLAZE	1M	5%	1/10W	R449	1-216-748-11	METAL GLAZE	39K	1%	1/10W
R304	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R450	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R305	1-216-019-00	METAL GLAZE	56	5%	1/10W	R451	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R312	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R452	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R319	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R501	1-216-024-00	METAL GLAZE	91	5%	1/10W
R320	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R502	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R321	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R503	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R323	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R504	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R324	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R506	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R325	1-216-019-00	METAL GLAZE	56	5%	1/10W	R508	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R326	1-216-019-00	METAL GLAZE	56	5%	1/10W	R509	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R327	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R510	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R328	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R511	1-216-150-00	METAL GLAZE	10	5%	1/8W
R401	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R512	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R402	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R513	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R403	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R514	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R404	1-216-037-00	METAL GLAZE	330	5%	1/10W	R515	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R405	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	R516	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R406	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R517	1-216-093-00	METAL GLAZE	68K	5%	1/10W
						R518	1-216-097-00	METAL GLAZE	100K	5%	1/10W

# D-T4/T40

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>					<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>				
R519	1-216-119-00	METAL GLAZE	820K	5%	1/10W		R706	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R520	1-216-095-00	METAL GLAZE	82K	5%	1/10W		R707	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R521	1-216-095-00	METAL GLAZE	82K	5%	1/10W		R708	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R522	1-216-081-00	METAL GLAZE	22K	5%	1/10W		R709	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R523	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		R710	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R524	1-216-089-00	METAL GLAZE	47K	5%	1/10W		R711	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R525	1-216-097-00	METAL GLAZE	100K	5%	1/10W		R712	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R526	1-216-114-00	METAL GLAZE	510K	5%	1/10W		R713	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R528	1-216-077-00	METAL GLAZE	15K	5%	1/10W		R714	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R529	1-216-686-11	METAL CHIP	30K	0.50%	1/10W		R715	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R530	1-216-686-11	METAL CHIP	30K	0.50%	1/10W		R716	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R531	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		R725	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R532	1-216-103-00	METAL GLAZE	180K	5%	1/10W		R726	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R533	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W		R727	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R534	1-216-121-00	METAL GLAZE	1M	5%	1/10W		R728	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R536	1-216-099-00	METAL GLAZE	120K	5%	1/10W		R729	1-216-180-00	METAL GLAZE	180	5%	1/8W	
R537	1-216-083-00	METAL GLAZE	27K	5%	1/10W		R730	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R538	1-216-094-00	METAL GLAZE	75K	5%	1/10W		R731	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R539	1-216-094-00	METAL GLAZE	75K	5%	1/10W		R732	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R540	1-216-086-00	METAL GLAZE	36K	5%	1/10W		R733	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R544	1-216-077-00	METAL GLAZE	15K	5%	1/10W		R734	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R545	1-216-121-00	METAL GLAZE	1M	5%	1/10W		R735	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R546	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		R736	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R547	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W		R737	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R548	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W		R738	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R549	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		R739	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R550	1-216-049-00	METAL GLAZE	1K	5%	1/10W		R740	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R551	1-216-049-00	METAL GLAZE	1K	5%	1/10W		R741	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R552	1-216-081-00	METAL GLAZE	22K	5%	1/10W		R742	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R553	1-216-049-00	METAL GLAZE	1K	5%	1/10W		R743	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R554	1-216-033-00	METAL GLAZE	220	5%	1/10W		R744	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R555	1-216-081-00	METAL GLAZE	22K	5%	1/10W		R745	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R556	1-216-073-00	METAL GLAZE	10K	5%	1/10W		R747	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R557	1-216-049-00	METAL GLAZE	1K	5%	1/10W		R749	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R558	1-216-073-00	METAL GLAZE	10K	5%	1/10W		R750	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R559	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		R753	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R560	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W		R755	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R561	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		R756	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R601	1-216-097-00	METAL GLAZE	100K	5%	1/10W		R761	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R602	1-216-089-00	METAL GLAZE	47K	5%	1/10W		R762	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R701	1-216-081-00	METAL GLAZE	22K	5%	1/10W		R763	1-216-150-00	METAL GLAZE	10	5%	1/8W	
R702	1-216-025-00	METAL GLAZE	100	5%	1/10W		R764	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R703	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		R765	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R704	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		R768	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R705	1-216-113-00	METAL GLAZE	470K	5%	1/10W		R769	1-216-081-00	METAL GLAZE	22K	5%	1/10W	

The components identified by mark  or dotted line with mark  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.